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Part 2 Appendices

ACTIVATION ANALYSIS: A BIBLIOGRAPHY

U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards

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[1] Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D. C. 20234.

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UNITED STATES DEPARTMENT OF COMMERCE
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Part 2 – Appendices

ACTIVATION ANALYSIS: A BIBLIOGRAPHY

(PART 2 – ISSUED SEPTEMBER 1968)

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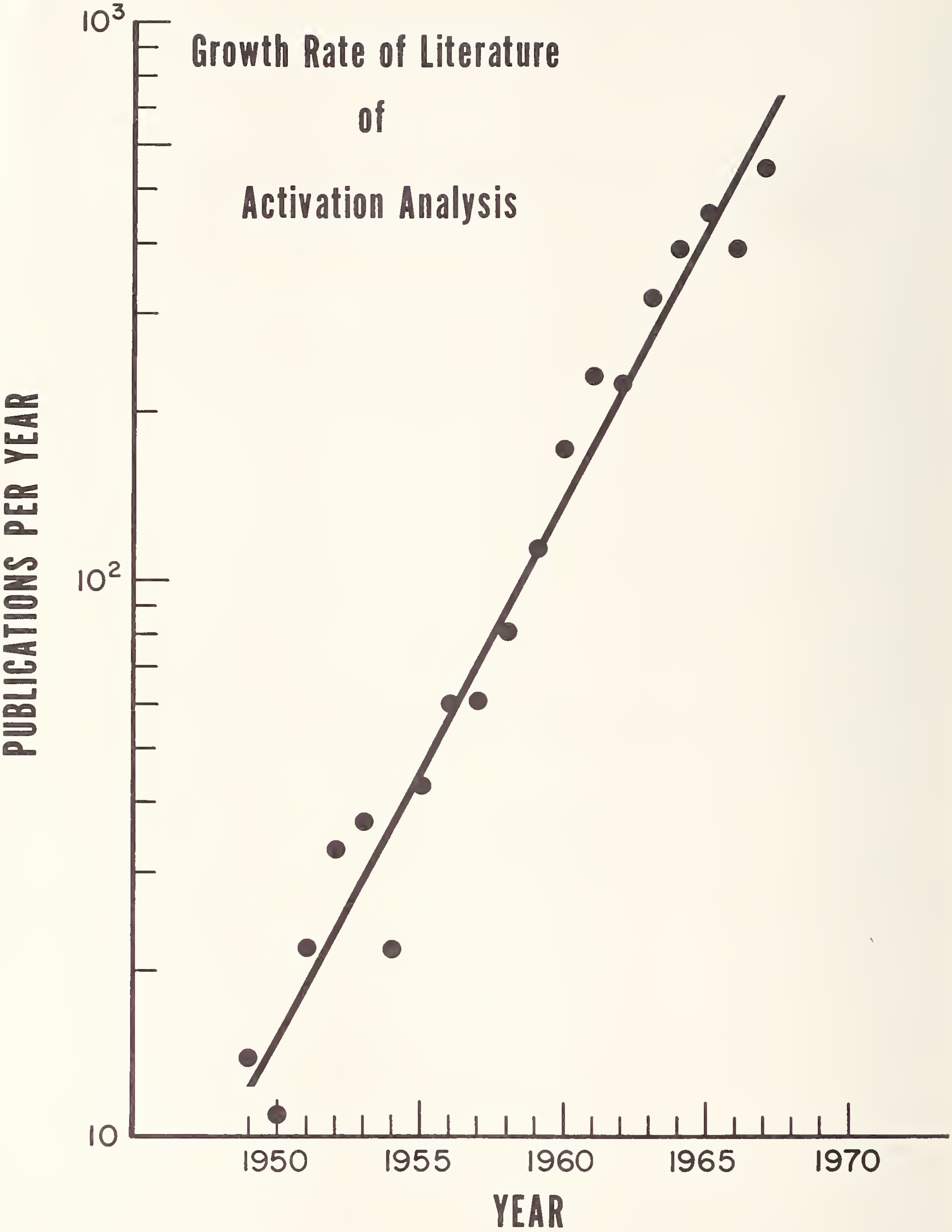
Growth Rate of Literature
of
Activation Analysis
PUBLICATIONS PER YEAR
10^3
10^2
10
1950
1955
1960
1965
1970
YEAR

ACTIVATION ANALYSIS - A BIBLIOGRAPHY
(Part 2)

Edited by
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ABSTRACT

References to activation analysis in the open literature are published from a computer readout. The first part of the two-part series contains references numbered according to their accession to the system. The second part contains an author index and three additional indices for "element determined", "matrix analyzed", and "technique used". The two parts, when used together, permit a literature search defined by the three indices. Part 1 will be updated periodically by addenda containing new references while Part 2 will be periodically revised and replaced by new pages which include cross references to the new accessions.

Key words: Activation analysis, bibliography, element determined, literature file, matrix analyzed, technique used.

APPENDIX I

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RAUSCH, H.	4153 5499 5793
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ROMMEL, M.A. 2680
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ROSSOUW, S.F. 4006
ROTARIU, G.J. 5709
ROTH, E. 2768

ROTH, L.J. 2642

ROTTMANN, J. 2678

ROTTSCHAFER, J.M. 4410

ROUBAULT, M. 1308

ROUECHE, A. 1426

ROUTTI, J.T. 5971

ROWE, M.W. 5716

ROWLAND, F.S. 728 909

RUBIN, B. 989

RUBIN, S. 423

RUCH, R.R. 183 1034 2782 2790 2792 2793 2959 2978

RUDELLI, M. 802

RUF, H. 2844

RUNDO, J. 155 3078

RUSHBROOK, P.R. 1214

RUSHIZKY, G.W. 5357

RUSSELL, H.T. 3064

RUSSELL, I.J. 1584 1655

RUSSKAYA, E.I. 3379

RUST, R.H. 2552 3345

RUSTICHELLI, F. 4208

RUTHERFORD, H.A. 1073 1472 1583

RUTTINK, J. 1748 3708

RUZICKA, J. 795 1121 1243 1244 1291 1346 1575 1579 1587 1588 1820 1930 1974 2154 2845 3084

RYABCHIKOV, D.I.	1285
RYABUKHIN, V.A.	544 662 1285
RYABUKHIN, Y.S.	5976
RYAN, V.A.	1576 4226
RYAN, W.P.	6038
RYBACH, L.	1376 1505
RYCHKOV, R.S.	1286 2717
RYGARD, J.	405 943
RYSKIN, G.Y.	425
RYTCHKOV, R.S.	544 662
SABBIONI, E.	1541 1598 1952 2794 2836 3724 3985 5987
SABINA, A.C.	4258
SABINE, T.M.	3783
SABO, E.	5759
SACCHETTI, N.	1406
SACHA, J.	6044
SAIFUTDINOVA, D.G.	1550 1585 3385
SAIRENJI, E.	1198 1446
SAISHO, H.	1232
SAITO, K.	1151 1194 1742
SAITO, N.	427 1198
SAITO, T.	5311 5379
SAITOH, M.	1496
SAIZEW, E.I.	1885

SAKAI, T. 1391

SAKAMOTO, A. 4374

SAKANOUE, M. 1391 2889 4302

SALAITA, G.N. 1843

SALMIN, J.P. 1885

SALMIN, Y.P. 3387

SALMON, L. 155 239 428 429 430 431 432 477 3426

SAMOSADNYI, V.T. 2764

SAMSAHL, K. 442 714 829 830 1089 1134 1412 1766 1797 1892 1894 2403 2718 4004 5760 5771 5785

SAMSON, C. 1912

SAMUELSSON, E.-G. 4323 5382

SANAD, W. 4203 5729

SANCHEZ IZQUIERDO, J. 2968

SANDERS, F.W. 993

SANDERS, W.M. 1604 3970 3977 5417 5752 5769

SANDOR, J. 1005

SANDRU, P. 1822

SANFORD, W.R. 1048

SANGUIST, V. 1415

SANKAR DAS, M. 1109 1449 1596 1639 1901 1902 1903 1911 2602 2976

SANO, H. 1198

SANTELLI, D.J. 1801

SARDI, A. 5416

SASAKI, E. 1446

SASAKI, M. 1402 1765

SASAKI, T. 1333

SASAKI, Y. 755

SASTRY, B.V.R. 5756

SATO, K. 838

SATO, M. 1115

SATO, R. 1780

SATO, Y. 5386 5928

SAUNKIN, O.F. 858

SAUTIN, A. 1957 4325

SAVEL, P. 911

SAVOSIN, S.I. 780 1430 2750

SAWAI, T. 1338 1468 3771 5921

SAYRE, E.V. 433 1032 1629 1834 1897 1926 2945 6031

SCHADE, H. 1091

SCHAUB, B. 3727

SCHEER, K.E. 6069

SCHERLE, W. 1010 1012

SCHIAVINI, G. 1095

SCHIERLING, H.E. 1336 1337 1423

SCHIFF, E. 4217

SCHILLING, J-G. 2763

SCHILTZ, J.C. 1454 1817

SCHINDEWOLF, U. 434 435 436

SCHIRJAJEWA, M.B. 1885

SCHLEIFFER, J-J. 2632

SCHLESINGER, H.L. 2647 2648 4263 6021 6030 6036

SCHMEISER, K. 437 438

SCHMIDT-BLEEK, F. 5403

SCHMIDT, D. 5440

SCHMIED, H. 1760 1842

SCHMITT, R.A. 439 613 648 932 933 944 1187 1251 1323 1356 1384 1634 1708 2735 5343 5720 5958 6010 6067

SCHNEIDER, H. 1367

SCHNEIDER, W. 1869

SCHOLES, P.H. 5389

SCHON, A. 1529

SCHONFELD, E. 2450 2533 2545 4210 4326

SCHONFELD, T. 394 440 694 749

SCHONTAG, A. 1732

SCHRADER, C.D. 1052

SCHRAGE, E. 1381

SCHRAMEL, P. 3746

SCHROEDER, G.L. 1216 1953 2694 2762

SCHUHL, C. 38

SCHULERT, A.R. 1858

SCHULTZ, W.W. 718 2571

SCHULZE, W. 441 627 711 898 1666 2513 2544 2566 3720 3978 5937

SCHUMANN, P. 2335

SCHUSTER, E. 5957

SCHUTZ, D.F. 614 1027

SCHWARTZ, D. 216

SCHWARZER, D. 158

SCHWEIKERT, E.A. 1375 2628 2629 6066

SCOTT, H.D. 4380 5390

SCOTT, J.E. 4263

SCOTT, W.L. 5394

SEABORG, G.T. 443

SEBESTIAN, I. 1363 1574

SEDLACEK, W.A. 1576

SEGEL, R.E. 862

SEINO, H. 516

SEIRMARCO, J.A. 881

SEITNER, H. 2296

SELZ, J. 1217

SEN SARMA, R.N. 15

SENFTLE, F.E. 171 445 446 447 2720 4282

SENS, J.C. 4209

SERVIAN, J.L. 2148

SETSER, J.L. 212 988 1022

SETTLE, D.M. 2517 3077 3101 3486 5979 6020 6033

SEVAST YANOV, Y.G.	1218
SEVIER, P.	5409
SEYFANG, A.P.	448 449 472 1347 1429
SHABANA, R.	2447 4319 5728 5729
SHAH, S.D.	677
SHAMAEV, V.I.	674 858 1215 1246 1247 3364
SHANKS, D.E.	2498 4214
SHARMA, H.D.	1902
SHARP, R.A.	439
SHATS, M.M.	490
SHAW, D.C.	5395
SHCHIOKAVA, T.	2674
SHCHULEPNIKOV, M.N.	1068 2721
SHEDLOVSKY, J.P.	148 927
SHEMAROV, F.V.	1764
SHENBERG, C.	4194
SHESTAKOV, B.I.	1430
SHIBA, K.	604 607 608 774 971 997 998 1038 1299 1300 1654 1682
SHIBAEVA, N.P.	4391
SHIBATA, H.	1650
SHIBUYA, M.	454 3714 5327 5725 5925
SHIDELER, R.W.	914 1054 2538
SHIGEMATSU, T.	1513 5776 5777
SHIKATA, E.	1398

SHIMELEVICH, Y.S.	969 1430 2750 3462
SHIMIZU, T.	575 820 1127
SHIMP, N.F.	263
SHIMURA, K.	2649
SHINAGAWA, M.	2727
SHIPMAN, G.F.	451
SHIRAISHI, H.	1382
SHIRYAEVA, M.B.	3387
SHKODA-ULYANOV, V.A.	4277 5319
SHMANENKOVA, G.I.	6053 6072
SHNEOUR, E.A.	839
SHORNIKOV, S.I.	1646 2965
SHORT, H.G.	452
SHTAN, A.S.	5317 5780
SHTASEL, A.	910
SHUMWAY, R.H.	1851
SICILIO, F.	936
SIEBERG, R.	3794
SIEMER, P.L.	1259
SILVA, C.M.	5358 5851
SILVANOVICH, Y.A.	5787
SILVERMAN, J.	636 740
SILVERMAN, R.H.	400
SIMKOVA, M.	1519 1545 2386 2878 3975
SIMNAD, M.T.	453

SIMON, F.O. 5959
SIMON, L. 941 1219
SIMONITS, A. 4231
SIMPSON, G. 561
SIMPSON, H. 179 626 852 1220 1570
SINGH, J. 5571
SINGHAL, N.S. 3356
SION, H. 1221
SIPPEL, R.F. 455
SIPPEL, R.S. 1148
SIRONI, G. 1254
SJOBERG, H.E. 1400 1893
SJOSTRAND, B. 533 534 535 1100 1239 1288 2563
SKINNER, W.A. 5751
SKIPPEN, G.B. 2839
SKLAVENITIS, H. 6001
SKLAVENITIS, L. 5875
SKOUGSTAD, M.W. 2656
SKOVORODKIN, N.V. 5318
SLATER, D.N. 1185 3530 5742
SLEPCHENKO, I.F. 783
SLOAN, R.W. 1843
SLOTH, E.N. 1230
SLOTT, R. 3962
SLOWEY, J.F. 2848 4219 4255

SLOWEY, J.F., JR.	4291
SLUNECKO, J.	1519 1545 2358 3975
SMAKHTIN, L.A.	985 3365
SMALES, A.A.	26 27 94 96 236 240 251 257 320 353 391 449 456 457 458 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 525 587 595 615 616 724 745 1145 1222 1275 1429 2338 2528 3979 4253 4266 5411
SMATHERS, J.B.	2141 5407 5743
SMIRNOV-AVERIN, A.P.	1218
SMIRNOV, A.A.	5704
SMIRNOV, V.I.	2337
SMIRNOV, V.N.	479 1280 3767
SMIRNOV, V.V.	5704
SMIRNOVA, N.B.	2717
SMIT, J. VAN R.	239 240 478 526
SMITH, B.A.	1458
SMITH, E.M.	1750
SMITH, E.R.	263
SMITH, G.D.	3750
SMITH, G.W.	1722 1801 2536 2537 4224 5985
SMITH, H.	154 309 310 378 481 565 651 675 788 1224 1225 1928 1977 1980 2565 2570 2572 2573 2719 2942 2958 2985 3507 3982 4267 5847 5944 6003 6042
SMITH, H.P., JR.	3788
SMITH, J.W.	155
SMITH, L.H.	2706 4199

SMITH, R.H. 692 1323 1356 1634 5720 6010

SMITH, R.L., JR. 273

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SMYTHE, L.E. 3968 6038

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SOLBERG, D.E. 959

SOLTYS, M.N. 1289

SOLVSTEN, S. 1241

SOMMERKORN, G. 2615

SONDEL, J.A. 2145 3061 5502

SONNINO, T. 772

SORANTIN, H. 1264 1273 1487 1492 1564 1830 1840 2601 2766 2950 3418 4191 4293 4308 4406 5438 5930

SOREMARK, R. 714 741 829 830 968 1317 1332 1512 1800 3086 4002 6055

SOROIU, M. 1416 5295

SOROKINA, A.V. 5318

SOUBEYRAND, R. 1805

SOULE, J.L. 57

SOULIOTIS, A.G. 928 1057 1964 1971 2701 4272 5415

SOWDEN, E.M. 483 484 485

SPADACCINO, E. 1260

SPALEK, J. 3811

SPEECKE, A. 1066 1828 2610 2643 5772 5808

SPENCER, R.P. 486 487 488 489 730

SPENGER, R.E. 2347

SPENKE, H. 1821

SPIKES, J.D. 3747

SPIRA, J. 4386

SPITSYN, V.I. 1227

SPRONK, N. 1925 5993

SRAPENYANTS, R.A. 1443

STALLWOOD, R.A. 863

STAMM, S.J. 4283

STANG, L.G., JR. 1873

STANLEY, C.W. 1794 1888

STARCHIK, L.P. 479 783 855 1280 3087 3373 3374 3375 3376 3379 5325 5620 5778 5779 5854

STARCHIK, M.P. 3767

STARFELT, N. 4000 5177 5238

STARIK, I.E. 490

STARIKOVA, N.A. 5435

STARK, H. 61 1292 1732 1829 2636 3987 5439

STARY, J. 1243 1244 1291 1346 1575 1579 1587 1588 1820 2154 3084

STEELE, E.L. 712 845 1058 1228 1567 1702 1712 1721 1852 1900 1912 2510 2598 2734 2947 2948 3028 3353 3553

STEEN, H.	2929
STEFANOV, G.I.	984 1754 2923 3739 5428
STEHLIK, G.	1370 1703 1767
STEIM, J.M.	1462 1479 1870 3716
STEIN, M.N.	21
STEINNES, E.	50 1768 2597 2739 2853 3079 3470 3961 4192 4195 4305 5366 5370 5405 5713 5731 5960 6074
STEJSKAL, R.	2878
STENSLAND, W.A.	1802
STEPHENS, W.E.	491
STERLINSKI, A.	5865
STERLINSKI, S.	902 1761 1884 2760 2989 4206 5341
STEVANCEVIC, D.B	1274
STEVANCEVIC, D.	1771
STEVENSON, P.C.	3380
STEVENSON, R.A.	2732
STEWART, D.C.	492
STIER, P.M.	1150 1340 2690
STIMSON, A.	3391 5390
STINISON, A.	4380
STITCH, S.R.	485
STOCKER, H-J.	2678
STOCKERT, H.	2769
STOENNER, R.W.	493
STOGOVA, G.B.	3374

STOJANOVIC, N. 4267
STOKELY, J.R. 2157
STOLL, N. 5450 5451 5452
STONE, C.A. 185 414 665 1311 1611
STRAIN, H.H. 1265
STRAIN, J.E. 82 1268 1361 1638 1642 1796 1940 1941 2531 3058 3074 5711
STRAIN, W.H. 1788 2124
STRAUSE, B.M. 509
STRELOW, F.W.E. 1292
STRIBEL, T. 494
STRICKLAND, E.H. 975
STROHAL, P. 5790
STRUTHERS, J.D. 5402
STRZYZEWSKA, B. 5862
STUBBINS, M. 6004
STUDIER, M.H. 1230
STUHL, Z. 88
STUKENBROEKER, G.L. 52 53
SUBBOTINA, T.I. 5356
SUDA, K. 2340
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SUFFREDINI, C.S. 439
SUGISHITA, R. 575
SUGISITA, R. 1307

SUITA, T. 2804

SUKHOV, G.V. 6053 6072

SULIN, V.V. 1646 2965 3462 5950

SUNDERMAN, D.N. 1586

SURKOV, Y.A. 1068

SURLS, J.P., JR. 1160

SUSLOW, V.G. 2965

SUTTON, A. 6002

SUZUKI, H. 5920

SUZUKI, I. 916

SUZUKI, K. 5925

SUZUKI, N. 1018

SUZUKI, T. 1446

SVENKE, E. 5423

SVENSSON, P. 5433

SVIRIDOV, A.I. 1548

SVIRIDOVA, A.I. 1207 1769

SWANBERG, S.C. 542

SWARTHOUT, J.A. 392

SWARTZ, H.M. 1452

SWIFT, G. 1685

SWISHER, J.A. 3973

SZABO, E. 1608 1614 1615 1832 3350 4153 5499 5793 5931

SZEBENYI, I. 4270 5970

SZEKELY, G, 501
SZEKRENYESY, T. 1005
SZOKOLYI, L. 1601

TABUSHI, M, 5777
TADA, K, 960
TAJIMA, E. 999
TAKACS, G. 4216 5326
TAKADA, K. 5432
TAKAGI, S. 424
TAKAGI, T. 2889
TAKEDA, T. 916
TAKEMOTO, K. 5872
TAKETANI, K, 755
TAKEUCHI, T., 1510
TALAT-ERBEN, M, 4221
TALBOT-BESNARD, S. 1621
TALBOT, J, 502
TALPOVA, E, 1664
TALPOVA, H, 939 1282 1392 1660 1662 1751 1752 3334
TALWAR, U.B, 2811
TAMURA, M. 5923
TANAKA, K. 2052
TANAKA, S. 1151 1194 1742
TANARRO SANZ, A, 2968

TANG, C.W. 6000
TANI, A. 1115 1116
TANNER, J.T. 1571 3352 4290
TARRAS, S. 1036
TASAKI, A. 1496
TATAR, J. 612 2940 2941 2956
TAURE, I.Y. 2337
TAUSEND, A. 2775 4299 4300
TAYLOR, D. 152 1773
TAYLOR, D.M. 1310 1411 5997 6007
TAYLOR, K.J. 5648
TAYLOR, N.K. 1853
TAYLOR, T.I. 503 505 506
TAYLOR, W.H. 407 2650
TEOFILOVSKI, C. 2149
TERA, F. 2277
TERADA, K. 4311
TERCHO, G.P. 3061 5502
TEREE, T.M. 6064
TERESI, J.D. 123
TERRANI, M. 5735
TERRANI, S. 5735
TERRELL, C.W. 1785 2104 2364
TERREY, D.R. 2433
TERTOOLEN, J.F.W. 1690

TESZLER, O. 1073

TEXACO DEVELOPMENT CORPORATION 1772

TEXAS A AND M 156 671 3791

TEXAS NUCLEAR CORPORATION 618 680 1889

THACKRAY, M. 1845

THIEL, A. 1524

THIERY, J. 1503

THILANDER, H. 968

THOMAS, A. 93

THOMAS, A.M. 595

THOMAS, C.C., JR. 2145 3061 5502

THOMAS, G.E. 373

THOMAS, R.C. 2145

THOMAS, W.C., JR. 2534

THOMPSON, A.J. 1812

THOMPSON, B.A. 508 509 912

THOMPSON, G.A. 189

THOMPSON, H.D. 255 322

THOMPSON, T.J. 216 3059

THOMSON, S.J. 3477 3478

THORESEN, P. 1419

THORPE, J.D. 6012

THOUZEAU, G. 57

TILBURY, R.S. 1340 2690 2697 3403
TITTLE, C.W. 510 679 5552
TITTMAN, J. 1680
TO-ON, M. 936 1899 1912 2705
TOBIAS, C.A. 138 512 513 1470
TODD, R. 1231 1347
TOERIEN, P.V.S. 5410
TOKUNAGA, O. 2464
TOKUNAGA, T. 4302
TOKYO SHIBAURA ELECTRIC CO. LTD. 5943
TOLBERT, B.M. 160
TOLGYESSY, J. 1754 2923 3739 5428 5859
TOLGYESSY, Y. 984
TOMCSANYI, A. 5416
TOMITA, I. 1232
TOMIZAWA, C. 5327
TOMLINSON, R.H. 2503 3956 6000
TOMLINSON, R.W.S. 155 6014
TOMNOVEC, F.M. 175
TOMOV, T.T. 984 1754 2923 3739 5428
TOMPKINS, A. 517
TOMPKINS, E.R. 267
TOMURA, K. 572 2283 2340 3994 5927
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TORDAI, L.	515
TORIUMI, H.	1446
TORIZUKA, K.	2440
TORKO, J.	2671
TOTH, G.	4270 5970
TOTH, L.	633
TOUSSET, J.	4260 4325 5579 5580
TOWELL, D.G.	1835
TRAVESI JIMENEZ, A.	1883 4249
TRAVESI JIMINEZ, A.	2765
TRAVESI, A.	1833 2714 2752 2753 4250 5991
TREW, J.R.	1372
TROLY, G.	1518 1538
TROMBKA, J.I.	1284
TSAI, H-T.	5868
TSANOS, N.	686
TSANOS, N.A.	1971 2701
TSELYSCHEV, S.	1762
TSETSKHLADZE, T.V.	2957
TSIRKUNOVA, I.	5869
TSIRKUNOVA, I.E.	5727
TSIRLIN, Y.A.	4275
TSUJI, H.	628 827 1111 1152 1202 1315 1656 1879 2384 5566 5924
TSUKAHARA, I.	575 820

TSURUMI, Y. 2711

TUCK, D.G. 1181

TUCKERMAN, M.M. 1746

TUMA, D.J. 2434 2445 3062

TUPPER, R. 33 34

TUREKIAN, K.K. 614 1094 1293 1688 3960 3969

TURKEVICH, A. 209 410 411 412 517 1212 4289

TURKOWSKY, C. 2636 3987 5439

TURKSTRA, J. 1825 5410 5761 6061

TURNER, G. 3081

TURNER, P.C.R. 965 1110

TURNER, S.E. 518

TURNOCK, A.C. 555

TUSTANOVSKII, V.T. 3087 5620 5778

TWITTY, B.I. 952

TWITTY, B.L. 1905 2122 2778 2798 3357 3981

TYDEN, G. 5433

UCHIYAMA, A. 187

UEMURA, T. 5726

UFRET, S.L. 2732

UJIHARA, Y. 2711

ULFENDAHL, H.R. 930

UMAROV, M. 5705

UMAROV, U. 5707

UMEZAWA, H.	357 1694
UNION CARBIDE	1024
UNITED KINGDOM ATOMIC ENERGY AUTHORITY	1371 1923
UNITED STATES ATOMIC ENERGY COMMISSION	520 1290 5849
UNIVERSITY OF WASHINGTON	1806
UPOR-JUVANCZ, V.	390 1616 3964
UPOR, E.	1615
URATA, Y.	1446
URLACHER, C.	2632
UYEDA, S.	2437
VACIK, J.P.	1233
VAISS, K.F.	1329
VAJTA, L.	4270 5970
VAKHTIN, B.S.	2966
VALENTINI, M.T.	1644 3955
VAN DEN BERG, A.J.	6019
VAN DEN BERGHE, H.	229
VAN DEN BROEK, S.E.	1792
VAN DEN WINKEL, P.	5808
VAN DOMELEN, B.H.	1946
VAN EESTEREN, J.	1516
VAN ERKELENS, P.C.	2036

VAN KOOTEN, W.J.	6013
VAN NAHL, T.W.	1569
VAN RAAPHORST, J.G.	2838 5996
VAN STYVENDAEL, M.	397
VAN WYK, J.M.	2586
VAN ZANTEN, B.	866 880 986 1234
VANATTA, J.C.	413
VARGA, L.	6069
VARTAPETYAN, B.B.	5435
VASILEVSKIS, J.	1187 1356
VASSOS, R.H.	2511
VEAL, D.J.	519 629 2619
VENET, A.M.	402
VENTER, J.H.	5761
VERBEEK, A.A.	2611
VERBINSKI, V.V.	3717
VERES, A.	1006
VERHEIJKE, M.L.	818
VERNIN, E.	1490 1640 1753 2667
VEZRANOVSKI, E.	5966
VIDAL, J.P.	1518 1600 5968
VIKHITILL, I.	1177
VILLAR, G.E.	1348
VINCENT, E.A.	522 523 524 525 724 1080
VINCENT, H.A.	1887 2354 2453 5739

VINCENT, J. 521 2633

VIS, H.L. 1552 6011 6063

VITING, B.I. 75 1238

VITOZHENC, G.C. 5950

VITOZHENTS, G.C. 1646 2965

VLASOV, D.A. 1068

VOBECKY, M. 1610 2741

VODOPIVEC, F. 1770

VOELKER, F. 77

VOGEL, J. 356 906 915 940 1321

VOGT, J.R. 199 285 1017 1954 2506 2774

VOIGT, A.F. 351 1283 1324 1802 1803 1849 2480 2495 2496 3775 5732 5740

VOLBORTH, A. 1229 1294 1887 2354 2453 5322 5353 5739

VOLDET, P. 2623

VOLFOVSKY, R. 1835

VON ARDENNE, M. 744

VON BAECKMANN, A. 2844

VON-GUNTEN, H.R. 1010 1012

VORISEK, M. 1877

VORRES, K.S. 1295

VOS, G. 5987

VOSS, F.S. 261

WACKS, M.E. 5745

WADE, J.T. 2519

WAGENER, K. 4278

WAGER, L.R. 526 724

WAGGONER, J.A. 1052 5384

WAGNER, A. 5450 5451 5452

WAGNER, C.D. 205 733 861 1014 1163

WAGNER, H.N., JR. 962 1750

WAGNER, R.T. 1967

WAHBA, S.S. 2870 5368

WAHL, W.H. 859 1150 1334 1340 1788 2382 2499 2662 2676 2690 2697 2789

WAHLGREN, M.A. 436 1863 2516 2799 3465 4294 6029

WAINERDI, R.E. 273 574 590 642 845 936 1029 1033 1058 1359 1567 1625 1702 1712 1721 1809 1866 1912 2520 2529 2586 2691 2740 3064 3461 3491 3493 3494 3662 3790 3797 5434 5975 6066

WAKI, A. 4207 5472

WAKITA, H. 1401 2437

WALIS, L. 1030

WALKER, E.J., 2524

WALKER, F.W. 1236

WALSH, W.K. 1073

WALTERS, R.M. 6049

WALTERS, R.R. 1230

WANG, H-C. 5437

WANKE, H.	142 143 217 268 269 528 529 530
WASHINGTON POST	1955
WASSEN, A.	565 1225 2570
WASSON, J.T.	1266 3476 5365
WATANABE, K.	572
WATANABE, T.	2283
WATANABE, Y.	1128
WATSON, R.T.	527
WAYMAN, C.H.	937 1237
WEAVER, M.L.	2929
WEBER, E.J.	2969
WEBER, G.	6059
WEBSTER, R.K.	469 595 1222
WEBSTER, W.	6068
WECHTER, M.A.	1597 1803 3775 5732 5740
WEICK, C.F.	433
WEINER, J.R.	989 1092 1253 2541
WELLWART, Y.	2157 3126
WELWART, Y.	772 782 1025 1070 1645
WENDT, H.R.	881
WENGER, P.E.	1321
WENNER, C.G.	2852 5771
WESTER, P.O.	504 1089 1134 1412 1766 1797 1920 2306 2638 2639 2776 2819 2999 5785
WESTERMARK, T.	317 533 534 535 560 573 620 1114 1239 2563 3734

WESTGAARD, L. 2754

WESTIN, R. 385

WETHINGTON, J.A. 959

WEY,. M.-T. 995

WEY, M-T. 2426 4269

WHITE, E.M.A. 33 34

WHITE, J.C. 2673

WHITLEY, J.E. 622 3466 3480 5933

WIBERLEY, J.S. 1850

WIDELL, M. 560

WIEHART, H. 2655

WIESNER, L. 1390 2746

WILKINS, W.W. 1058 1712 1721 1809 1866 2703

WILKNISS, P.E. 1330 1730 2379 3992 4198 4273 5420

WILLARD, J.E. 536

WILLERS, G. 2775 4299 4300

WILLIAMS, A.I. 452 537 1240

WILLIAMS, D.D. 729 1123

WILLIAMS, G.H. 2254

WILLIAMS, J.D. 1311

WILLIAMS, M. 1930

WILSON, H.W. 3489 3499

WILSON, R. 1860

WILSON, W.E., JR. 2123 4283 5733 5746

WILZBACH, K.E. 256
WINCHESTER, J.W. 538 623 654 739 748 913 981 1060 1216 1266 1457 1569 1726 1835 1872 1874 2672 2693 2763 2873 5397 6017
WING, J.A. 1297 2516 2799 3465 4294
WINTERINGHAM, F.P.W. 539 540 541 543
WISEMAN, J.D.H. 616
WODKIEWICZ, L. 248 1133 1135 1542 5861
WOHLLEBEN, K. 5957
WOJTKOWSKA, J. 621 1859
WOLBERG, J.R. 2494
WOLFE, R. 138 513
WOLFLE, R. 2644 5591 5592
WOLICKI, E.A. 5543
WONG, K.M. 1324
WONG, K.Y. 5981
WOOD, A.J. 469 470 471 473 1921
WOOD, D.E. 1407 1875 1950 1956 2542 2569 2577 2580 3796 5748 6075
WOOD, H.L. 1572
WOOD, J.D.L.H. 1701 2526 2527
WOODMAN, F.J. 670
WOODRUFF, G.L. 2123 4283 5733 5746
WOODS, J.D. 2480 2496
WOODWARD, K.T. 2585
WORMALL, A. 33 34

WORWOOD, M. 6007

WRIGHT, H.W. 1060

WRIGLEY, R.C. 1478

WULFF, J. 1966

WYTTENBACH, A. 1010 1012 1973 2645 3998

YAGI, M. 1298

YAJIMA, S. 375 606 607 608 899 971 997 998 1038 1063 1299 1300 1654 1672 1679 1682

YAKOVLEV, Y.V. 544 662 785 985 1068 1648 2721 5786

YAKUBSON, K.I. 1559 5555

YAMADA, K. 754

YAMADA, Y. 804 1515

YAMAGATA, N. 999 1563

YAMAGISHI, S. 215 775 777 945 992 994 1003 1009 1139 1140 1349 1409 1420 1497 1533 1631

YAMAKI, N. 5923

YAMAMOTO, K. 5922

YAMAMOTO, R. 575 820

YAMAMOTO, S. 5361

YAMASHITA, H. 2800

YANAGISAWA, I. 5929

YANKOVSKII, A.V. 3464 5320

YANSHKEVICH, V.A. 2660

YASUNAGA, T. 572 922 1693

YAVORSKY, P.M. 2933

YAZAWA, K. 1408

YEH, S.J. 1909

YON, E. 4347

YOSHIDA, H. 1509 2683

YOSHIKAWA, H. 5929

YOSHIMURA, Y. 4311

YOSHISAKI, M.B. 4258

YOUMANS, A.H. 996 1686

YOUNG, M.H. 3356

YUITA, K. 5925

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YULE, H.P. 659 951 1327 1620 1649 1673 2116 2452 2595 2689 3798 6087

YUSTER, P.H. 133

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ZAITSEV, E.I. 949 2747

ZAKHIDOV, A.S. 5858

ZALESSKII, V.Y. 949

ZAMFIR, I. 3759

ZAMYATINA, V.N. 1235 2369

ZAMYATNINA, V.N. 871 1191

ZAPOROZHETS, V.M. 3462

ZDANOVICH, I.D. 5779

ZELENIN, V.M. 4196

ZELLER, J. 1495

ZEMAN, A. 1121 1243 1244 1291 1587 1588 1820 1974 2154 2845 3084

ZENGER, J.H. 1052

ZHABIN, A.I. 3732

ZHADIN, V.S. 978

ZHAVORONKOV, V.Y. 2966

ZHELTIKOV, A.N. 5577

ZHIVKOV, Z. 984

ZHURAVSKAYA, E.V. 3729

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ZIESSOW, D. 4278

ZIMEN, K.E. 4278

ZITNANSKY, B. 1363 1574

ZIV, D.M. 1430

ZIVKOV, Z. 2923

ZMIJEWSKA, W. 1245 3091 5697 5865

ZONDERHUIS, J. 2838 3738 4230

ZUBER, K. 619 4328

ZUPPINGER, K. 3959

ZVEREV, B.P. 1207 1546 1547 1561 3361

ZVYAGIN, V.I. 1207 1546 1547 1548 1561 1769 3361 3384 3388 3736

ZVYAGINA, L.S. 1769 3388 3736

ZVYAGINSEV, O.E. 674

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APPENDIX II

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ACTINIUM

1439

ALUMINUM

98 104 113 130 140 141 175 205 301 382 384 393 419 423
433 455 471 491 509 518 555 567 580 605 607 612 625 635
637 641 665 695 702 711 752 760 810 821 824 834 845 848
849 850 851 895 897 903 941 961 966 974 1097 1138 1140
1161 1193 1213 1220 1226 1263 1334 1340 1386 1414 1419
1420 1442 1456 1460 1466 1471 1492 1558 1559 1611 1616
1642 1709 1710 1721 1725 1746 1785 1793 1794 1798 1813
1857 1888 1889 1896 1897 1898 1912 1965 2144 2306 2498
2499 2504 2507 2526 2550 2662 2689 2699 2751 2764 2766
2931 2933 2940 2941 2956 3075 3355 3365 3369 3370 3384
3461 3727 3753 3788 3790 3793 3976 4191 4193 4216 4231
4232 4258 4286 4293 5326 5383 5384 5591 5727 5759 5957
5970 5978 6056 6081

ANTIMONY

9 12 21 54 56 83 103 141 149 166 167 174 183 205 215
231 246 252 255 279 322 323 419 454 460 469 473 509 544
572 581 606 614 619 625 649 662 674 688 702 704 735 760
767 775 778 799 803 805 806 845 870 879 886 888 894 899
927 942 945 950 977 992 997 1027 1030 1034 1063 1064
1068 1089 1095 1118 1123 1124 1133 1134 1135 1138 1146
1166 1174 1191 1193 1223 1226 1231 1245 1246 1254 1272
1275 1286 1299 1300 1314 1338 1344 1349 1354 1371 1412
1434 1438 1441 1456 1466 1469 1471 1472 1477 1492 1500
1533 1542 1548 1564 1571 1587 1603 1613 1616 1648 1672
1693 1699 1700 1710 1715 1723 1732 1736 1737 1746 1766
1797 1825 1848 1858 1894 1907 1920 1977 2144 2296 2308
2369 2386 2403 2430 2464 2493 2523 2548 2550 2601 2612
2639 2688 2689 2694 2699 2739 2766 2769 2776 2801 2819
2852 2931 2938 2950 2999 3065 3352 3383 3418 3487 3514
3723 3730 3732 3759 3785 3808 3949 3957 3988 4216 4232
4253 4268 4286 4290 4293 4300 4308 4328 4329 4381 5326
5344 5390 5399 5438 5499 5619 5725 5729 5750 5771 5785
5787 5793 5936 5944 5960 5977 5981 5991 6003 6008 6012
6037

ARGON

54 55 121 122 268 290 354 419 493 529 670 683 977 1004
1226 1345 1416 1539 1719 1891 1924 2731 3081 3483 4198
4224 4278 5295 5449

ACTIVATION ANALYSIS-ELEMENT DETERMINED

ARSENIC

4 5 22 54 55 56 103 116 124 134 140 141 149 154 165 166
167 172 174 189 193 194 198 205 215 242 245 246 248 255
270 290 309 310 328 351 370 371 378 409 419 424 431 451
465 469 473 474 475 476 481 502 504 509 541 544 551 565
571 572 584 593 606 625 640 649 659 662 674 686 688 689
702 704 704 706 707 758 760 767 775 778 799 802 804 805
810 838 845 870 871 879 888 892 894 896 902 911 944 945
970 985 992 997 1063 1064 1068 1069 1100 1118 1133 1134
1135 1142 1146 1153 1166 1171 1174 1177 1191 1192 1193
1223 1225 1245 1246 1272 1275 1288 1299 1300 1314 1344
1354 1373 1412 1441 1442 1446 1469 1471 1473 1477 1533
1542 1548 1588 1603 1613 1616 1617 1628 1648 1649 1665
1672 1693 1699 1710 1725 1727 1728 1734 1737 1746 1749
1760 1770 1797 1848 1862 1894 1907 1920 1928 1965 1976
2296 2308 2333 2369 2403 2495 2497 2508 2523 2548 2550
2570 2619 2638 2639 2640 2688 2689 2690 2699 2707 2717
2719 2721 2769 2773 2776 2795 2801 2819 2852 2871 2926
2942 2943 2954 2958 2999 3098 3350 3383 3483 3514 3713
3725 3726 3730 3731 3748 3791 3808 3993 4232 4253 4268
4269 4285 4319 5336 5344 5349 5358 5385 5415 5428 5438
5499 5510 5619 5771 5785 5793 5851 5864 5926 5931 5944
5983 5991 6003 6008 6023 6037 6039 6040 6052

BARIUM

54 55 56 67 68 183 189 209 214 217 290 326 423 483 484
485 504 588 614 631 635 676 686 688 704 705 708 723 760
810 815 824 845 879 966 1014 1027 1034 1045 1086 1118
1134 1150 1188 1190 1191 1193 1212 1226 1281 1334 1340
1361 1412 1597 1670 1699 1710 1725 1727 1738 1797 1815
1825 1890 1896 1920 1973 2308 2464 2474 2498 2523 2550
2638 2639 2676 2689 2717 2776 2804 2819 2852 2965 2999
3355 3383 3483 3775 3960 3988 4214 4263 5500 5619 5785
5936 5977 5991 6002 6067

BERYLLIUM

169 170 184 185 201 380 383 455 479 554 669 855 908 978
983 1065 1081 1082 1083 1136 1160 1175 1178 1270 1280
1435 1609 1637 1861 1871 2318 2777 3072 3767 4193 5522
6056

ACTIVATION ANALYSIS-ELEMENT DETERMINED

BISMUTH

103 141 146 166 167 255 411 419 509 688 697 760 879 894
1121 1124 1212 1354 1477 1613 1699 2550 3464 3793 5320
5344 5381 5398

BORON

82 144 181 201 216 333 335 382 455 495 497 530 791 855
904 905 1013 1091 1280 1312 1393 1546 1547 1561 1618
1787 1821 1823 1985 2251 2298 2498 2661 2712 2987 3059
3126 3361 3376 3466 3767 3811 3962 3976 4193 4211 5332
5408 5429 5566 5756 5779 5854 5919 5932 5933 6056

BROMINE

23 54 55 56 62 68 100 117 126 205 290 328 347 437 442
504 539 602 625 631 635 641 659 686 688 697 702 704 706
714 760 810 824 827 829 830 851 888 933 934 942 977
1012 1055 1072 1086 1096 1118 1134 1208 1226 1266 1412
1419 1433 1462 1472 1479 1480 1492 1514 1569 1572 1577
1606 1617 1633 1709 1710 1736 1737 1746 1797 1848 1870
1874 1920 1964 2308 2347 2403 2508 2509 2548 2550 2614
2619 2638 2639 2689 2693 2694 2717 2730 2766 2776 2819
2852 2871 2873 2991 2999 3059 3101 3360 3365 3483 3708
3716 3791 3808 4194 4214 4254 4285 4329 5370 5390 5397
5510 5714 5718 5749 5751 5771 5775 5785 5870 5920 5924
5925 5929 5948 5975 5977 5995 6001 6012 6017 6023 6037
6055 6058 6085

CADMIUM

9 80 82 103 141 166 167 174 180 255 328 416 419 508 509
522 535 606 631 662 674 688 697 704 710 713 790 799 815
870 879 894 968 1006 1014 1042 1045 1063 1080 1088 1089
1113 1118 1123 1134 1150 1191 1240 1246 1277 1320 1332
1334 1340 1344 1354 1412 1441 1442 1469 1471 1472 1477
1478 1584 1603 1614 1634 1655 1699 1703 1709 1710 1725
1766 1797 1800 1832 1856 1920 2308 2369 2508 2523 2550
2639 2654 2676 2689 2718 2769 2776 2819 2852 2871 2999
3376 3382 3383 3808 3811 3949 3964 4214 4267 5307 5325
5345 5369 5619 5698 5703 5779 5785 5922 5944 5977 5991

ACTIVATION ANALYSIS-ELEMENT DETERMINED

CALCIUM

22 54 56 103 141 155 166 167 174 205 328 423 442 495
504 509 529 640 652 673 674 688 699 704 708 714 760 815
829 830 848 852 879 1045 1086 1087 1089 1118 1124 1134
1159 1166 1193 1247 1281 1292 1354 1362 1371 1457 1466
1559 1611 1699 1706 1709 1710 1726 1738 1766 1782 1797
1800 1806 1818 1843 1857 1872 1917 1920 1975 2308 2323
2422 2523 2550 2618 2638 2639 2687 2689 2737 2751 2776
2789 2819 2852 2871 2945 2963 2999 3383 3793 4193 4258
4329 5384 5386 5390 5771 5785 5981 6004 6010 6014 6044
6067 6073 6081

CALIFORNIUM

822

CARBON

4 8 29 45 46 49 105 113 118 119 201 351 401 417 423 455
497 498 578 623 637 688 703 704 744 767 811 814 913
1026 1065 1219 1263 1312 1414 1560 1599 1604 1646 1778
1798 1816 1823 1831 1837 1849 1889 1898 1951 2298 2495
2504 2505 2550 2554 2652 2661 2933 2948 2949 2965 3070
3077 3727 3753 3976 3977 4193 4209 4211 4226 4386 5238
5442 5621 5769 5954 6004

CERIUM

103 115 141 267 439 546 588 676 688 704 705 767 824 896
1042 1134 1226 1412 1710 1797 1835 1920 1945 1957 1978
2308 2474 2498 2639 2689 2694 2776 2819 2836 2852 2945
2999 3395 3766 3780 3949 5308 5369 5771 5785 5936

CESIUM

79 93 96 103 138 166 167 300 328 433 460 469 477 504
588 614 676 688 705 790 810 815 879 999 1027 1042 1045
1089 1134 1193 1222 1226 1265 1412 1449 1466 1477 1563
1699 1710 1727 1736 1761 1766 1797 1812 1897 1920 1973
2308 2508 2523 2548 2638 2639 2689 2776 2819 2852 2871
2931 2989 2999 3375 3383 4310 4381 5341 5369 5500 5619
5771 5785 5788 5934 5936 6012 6016 6037 6057

ACTIVATION ANALYSIS-ELEMENT DETERMINED

CHLORINE

23 31 32 35 37 44 48 54 55 56 62 68 81 82 117 141 155
205 290 291 328 419 437 442 588 591 602 625 635 637 641
652 676 686 686 697 699 702 704 705 714 732 760 777 824
829 830 845 849 851 871 887 895 921 932 933 941 942 966
977 992 1010 1061 1086 1138 1193 1200 1208 1217 1226
1263 1266 1320 1331 1442 1456 1477 1492 1520 1539 1569
1595 1617 1670 1689 1709 1710 1723 1725 1738 1746 1764
1772 1819 1843 1874 1902 1913 1971 2141 2148 2347 2422
2498 2508 2550 2614 2673 2689 2693 2701 2758 2766 2775
2871 2873 2930 2965 2981 3101 3355 3360 3483 3708 3736
3752 3778 3791 4191 4193 4195 4258 4285 4296 4299 4327
5386 5390 5397 5510 5718 5721 5751 5924 5948 6011 6014
6017 6055 6056 6063 6085

CHROMIUM

22 39 97 103 126 140 141 166 174 205 230 252 291 328
371 419 433 460 469 482 508 509 614 625 637 640 641 667
674 688 706 712 716 718 726 735 741 760 767 789 806 815
879 888 920 942 977 985 987 989 1030 1042 1118 1124
1134 1138 1165 1211 1226 1245 1247 1251 1254 1255 1263
1275 1277 1293 1333 1349 1412 1434 1436 1442 1456 1471
1472 1477 1492 1512 1564 1614 1649 1699 1707 1709 1710
1717 1723 1725 1736 1737 1760 1786 1795 1797 1825 1832
1833 1844 1856 1897 1920 1965 2296 2306 2308 2430 2473
2498 2508 2523 2548 2559 2597 2601 2639 2654 2662 2673
2689 2690 2717 2721 2735 2739 2753 2766 2769 2776 2819
2846 2852 2870 2871 2882 2950 2999 3005 3383 3384 3470
3723 3791 3957 3964 3988 4192 4216 4253 4310 5326 5343
5350 5369 5390 5438 5448 5499 5500 5581 5619 5728 5771
5785 5788 5808 5936 5941 5977 6013 6037

COBALT

4 5 13 47 80 83 103 124 130 138 140 141 166 167 174 205
246 252 254 263 270 328 352 356 390 419 428 433 460 462
470 482 502 504 509 513 531 588 594 614 616 620 625 635
637 641 662 667 674 676 688 697 704 705 717 724 726 729
735 741 760 767 789 790 799 804 810 813 815 823 834 852
870 879 883 892 906 915 920 940 941 942 977 994 1009
1027 1042 1045 1088 1094 1095 1097 1098 1099 1118 1123
1124 1129 1134 1138 1165 1167 1171 1172 1183 1190 1193
1193 1204 1211 1226 1231 1247 1251 1254 1262 1263 1273
1277 1293 1313 1321 1344 1349 1354 1371 1406 1411 1412
1426 1434 1438 1441 1442 1443 1454 1456 1466 1471 1472
1477 1492 1512 1515 1541 1564 1614 1644 1699 1707 1709

COBALT (CONTINUED)

1710 1717 1723 1725 1727 1729 1741 1749 1760 1785 1797
1813 1817 1825 1827 1832 1833 1856 1860 1897 1920 1965
2036 2296 2306 2308 2430 2447 2495 2508 2523 2548 2550
2578 2601 2638 2639 2640 2654 2658 2689 2690 2707 2707
2717 2718 2723 2725 2735 2739 2744 2752 2766 2769 2776
2819 2846 2852 2870 2871 2876 2882 2931 2950 2957 2999
3005 3383 3388 3418 3470 3661 3713 3716 3730 3731 3740
3810 3955 3957 3964 4153 4153 4264 4295 4308 4315 4317
4328 4381 5336 5343 5345 5369 5438 5448 5510 5619 5697
5703 5728 5759 5771 5785 5788 5808 5936 5941 5955 5967
5977 5981 6012 6016 6037 6067

COPPER

5 6 7 12 22 54 55 56 63 68 78 81 83 102 103 116 130 138
140 141 149 166 167 174 183 189 200 205 215 238 246 252
255 270 290 291 322 328 351 370 371 390 398 402 408 419
423 442 443 454 462 469 470 471 473 501 502 504 508 509
513 531 544 550 560 567 571 572 573 594 606 616 621 637
641 648 649 652 662 674 675 686 688 695 699 702 704 706
710 712 714 724 726 755 760 767 772 775 789 799 803 804
805 806 810 813 824 825 829 830 834 848 849 870 879 882
888 892 894 895 896 899 919 920 922 938 941 945 977 982
985 987 992 997 1000 1018 1030 1034 1045 1063 1068 1069
1073 1086 1089 1093 1098 1099 1105 1107 1108 1118 1129
1132 1133 1134 1135 1138 1141 1156 1162 1165 1166 1172
1190 1191 1211 1223 1226 1240 1244 1245 1246 1251 1254
1255 1263 1269 1272 1274 1275 1286 1287 1300 1306 1332
1344 1349 1354 1373 1384 1398 1411 1419 1421 1441 1442
1456 1466 1469 1471 1472 1473 1492 1504 1510 1515 1521
1533 1540 1542 1554 1555 1556 1557 1559 1603 1616 1617
1623 1641 1645 1648 1652 1672 1692 1699 1700 1703 1707
1708 1709 1710 1725 1736 1737 1746 1748 1749 1760 1766
1767 1769 1797 1800 1815 1817 1819 1825 1828 1832 1833
1841 1848 1855 1859 1886 1895 1907 1920 1925 1926 1965
1973 1975 1976 2125 2141 2144 2306 2308 2333 2358 2369
2386 2426 2495 2508 2511 2523 2535 2539 2548 2550 2552
2578 2579 2590 2597 2601 2610 2619 2638 2639 2640 2673
2688 2689 2690 2699 2713 2717 2718 2721 2723 2724 2728
2735 2739 2753 2766 2769 2776 2786 2801 2819 2848 2852
2871 2876 2882 2929 2930 2950 2965 2978 2999 3005 3027
3061 3065 3075 3341 3345 3350 3369 3371 3372 3373 3382
3383 3482 3483 3487 3708 3710 3713 3723 3727 3730 3731
3732 3738 3740 3760 3791 3797 3808 3957 3961 3964 3988
3991 3994 3998 4153 4191 4216 4217 4230 4232 4253 4267
4285 4291 4293 4298 4315 4329 5326 5336 5343 5345 5368

COPPER (CONTINUED)

5382 5383 5390 5398 5399 5403 5499 5502 5510 5579 5619
5697 5703 5725 5750 5770 5785 5793 5864 5869 5924 5928
5931 5935 5944 5977 5981 5991 5995 6003 6007 6008 6009
6016 6037 6055 6067

DYSPROSIUM

79 115 139 188 252 267 343 396 419 439 604 713 757 824
920 958 982 998 1011 1038 1196 1199 1226 1329 1466 1567
1648 1682 1702 1710 1723 1835 1945 1957 2369 2597 2601
2689 2694 2735 2920 2950 3770 3780 3811 5746 5992 6074

ERBIUM

115 267 439 544 631 824 1055 1195 1226 1344 1478 1655
1710 1945 1957 1959 2689 2735 3100 4214

EUROPIUM

39 79 115 139 228 267 343 433 439 572 585 588 662 676
705 845 958 998 1226 1329 1466 1682 1710 1835 1897 1945
1957 1959 2350 2474 2689 2694 2735 2800 2945 3395 3397
3714 3770 3780 3811 4301 5740 5771 5777 5936 6057 6074

FLUORINE

17 23 29 105 141 201 313 382 423 455 479 549 659 704
712 716 760 824 855 895 986 1055 1065 1084 1157 1263
1280 1312 1442 1514 1639 1649 1764 1778 1793 1813 1823
1961 2126 2433 2498 2550 2584 2623 2666 2689 2796 2965
2987 3059 3089 3101 3767 3781 4000 4193 4198 4261 4276
4284 4392 5177 5356 5445 6056 6085

GADOLINIUM

79 103 115 139 267 439 688 704 767 824 845 948 1226
1329 1710 1785 1945 1957 1959 2689 2735 3811 4214 4325
5308 5740 6043

ACTIVATION ANALYSIS-ELEMENT DETERMINED

GALLIUM

4 12 66 68 80 84 103 166 167 187 210 238 249 252 255
360 361 370 398 419 443 509 544 606 635 662 688 704 707
726 760 767 799 805 806 815 834 845 870 879 895 902 920
985 987 1045 1063 1086 1088 1092 1098 1099 1133 1134
1135 1138 1165 1166 1226 1245 1246 1264 1272 1338 1349
1441 1469 1477 1510 1548 1603 1616 1699 1700 1710 1723
1736 1737 1746 1797 1817 1974 1976 2444 2523 2548 2550
2579 2601 2683 2688 2689 2717 2718 2721 2769 2801 2950
3059 3382 3383 3476 3485 3487 3514 3730 3791 3797 3961
4310 5345 5365 5619 5771 5785 5787 6037

GERMANIUM

469 706 824 1055 1118 1275 1710 1863 2689 2954 3476
3481 3799 4253 5344 5365 5430

GOLD

9 13 14 85 103 124 149 163 165 166 178 186 187 189 205
215 235 246 328 374 390 405 409 419 424 462 509 512 523
524 525 544 545 549 572 601 614 619 625 630 631 640 659
662 674 686 688 702 706 710 713 714 724 754 755 758 760
767 799 810 828 829 830 848 858 870 879 887 888 894 942
943 956 968 977 995 997 1007 1014 1027 1045 1055 1060
1073 1074 1089 1118 1132 1133 1134 1135 1191 1193 1205
1226 1233 1241 1254 1271 1277 1286 1299 1306 1310 1320
1332 1349 1383 1402 1412 1456 1471 1472 1477 1478 1492
1496 1506 1550 1551 1566 1581 1584 1585 1610 1616 1641
1648 1649 1655 1672 1699 1710 1725 1727 1736 1737 1743
1763 1766 1797 1800 1920 1926 1929 1930 1962 2123 2296
2308 2333 2369 2508 2511 2523 2548 2550 2614 2639 2641
2688 2689 2699 2715 2717 2718 2721 2766 2769 2776 2801
2805 2819 2852 2871 2887 2904 2923 2964 2966 2999 3342
3350 3367 3382 3383 3385 3418 3467 3514 3708 3710 3738
3757 3964 4153 4217 4230 4232 4242 4244 4249 4307 4308
4309 4310 4312 4328 4329 5344 5364 5390 5393 5399 5499
5500 5579 5619 5704 5717 5761 5787 5808 5848 5858 5931
5940 5942 5949 5959 5977 5981 6008 6037 6050

ACTIVATION ANALYSIS-ELEMENT DETERMINED

HAFNIUM

9 24 103 166 167 1/6 212 225 238 252 291 313 325 347
375 419 494 549 588 614 631 641 676 683 688 704 705 726
760 790 810 824 828 879 895 899 920 967 987 988 1003
1014 1022 1042 1045 1055 1097 1134 1165 1173 1185 1193
1226 1236 1381 1410 1471 1472 1477 1492 1564 1573 1574
1578 1612 1615 1642 1699 1709 1710 1723 1736 1795 1797
1920 1931 2550 2559 2601 2689 2717 2735 2766 2852 2950
2979 3811 3996 4214 5369 5500 5515 5517 5771 5785 5788
5936

HELIUM

114 158 528 563 721

HOLMIUM

103 115 211 267 343 439 544 662 688 704 713 767 1036
1042 1226 1344 1466 1478 1597 1655 1710 1835 1945 1957
1959 2621 2689 2735 5732

HYDROGEN

206 207 1062 1377 1415 1772 1785 1843 1898 1906 2303
3033 3072 3078 5319

INDIUM

82 141 166 205 210 229 234 239 240 249 255 272 301 344
419 436 478 509 526 544 588 631 637 662 674 676 697 704
705 713 724 742 760 799 810 815 870 879 894 924 941 957
964 1006 1014 1045 1055 1118 1133 1134 1135 1166 1168
1202 1209 1226 1243 1247 1263 1275 1349 1443 1472 1477
1478 1548 1564 1603 1616 1655 1671 1699 1710 1727 1754
1758 1797 1879 2340 2444 2523 2525 2601 2614 2640 2683
2688 2689 2717 2718 2769 2801 2950 2966 3079 3383 3514
3730 3731 3739 3740 4214 4253 4286 4328 5336 5343 5345
5619 5703 5785 5870

IODINE

23 50 54 55 56 61 62 68 90 117 126 130 205 290 333 379
602 634 638 686 688 697 704 725 760 810 824 827 848 851
882 926 962 965 966 1020 1086 1096 1105 1110 1122 1143
1153 1208 1230 1250 1259 1266 1278 1326 1463 1470 1519
1529 1569 1653 1710 1725 1750 1824 1874 1914 1964 2440
2508 2546 2550 2558 2689 2693 2695 2758 2813 2873 2972
2982 3077 3101 3358 3360 3468 3483 3745 3808 3959 4190
4191 4232 4293 4310 5390 5397 5699 5716 5718 5948 5977
5995 5999 6000 6015 6017 6023 6047 6058 6068 6085

IRIDIUM

2 9 135 145 221 352 545 588 631 662 676 698 705 727 774
776 810 817 824 907 964 1014 1055 1095 1176 1193 1214
1226 1260 1344 1425 1566 1581 1693 1710 1727 2296 2515
2644 2689 2844 3467 3473 3530 3810 3949 4214 4312 5363
5399 5436 5619 5703 5717 5940

IRON

4 22 78 83 97 102 103 113 116 138 141 166 167 174 238
246 252 255 263 291 322 328 352 371 398 408 419 423 433
471 482 504 508 509 531 567 588 606 614 637 640 641 652
657 662 665 676 688 692 699 704 705 712 713 716 726 735
741 755 760 789 790 806 815 834 879 894 920 942 961 977
987 1005 1042 1045 1063 1089 1118 1123 1134 1138 1165
1166 1184 1190 1193 1226 1251 1254 1263 1273 1277 1319
1338 1354 1373 1411 1412 1419 1434 1438 1456 1460 1466
1469 1471 1477 1512 1542 1559 1564 1603 1611 1614 1616
1632 1651 1699 1709 1710 1717 1721 1736 1766 1785 1786
1797 1798 1799 1820 1843 1844 1856 1860 1889 1897 1898
1912 1920 2308 2447 2507 2523 2526 2548 2550 2601 2629
2638 2639 2654 2658 2688 2689 2690 2694 2717 2718 2723
2725 2735 2769 2776 2789 2801 2819 2846 2852 2870 2871
2876 2878 2931 2933 2950 2965 2999 3005 3075 3382 3383
3418 3461 3730 3790 3957 3964 4005 4198 4211 4258 4264
4308 4315 5343 5345 5369 5383 5384 5619 5697 5728 5747
5759 5766 5771 5785 5787 5788 5808 5864 5936 5939 5941
5955 5977 5981 5991 6012 6016 6037

KRYPTON

1539 1543 1891 2689 3468

ACTIVATION ANALYSIS-ELEMENT DETERMINED

LANTHANUM

79 103 115 252 395 411 419 433 439 504 511 572 585 688
704 726 767 896 920 958 977 998 1038 1042 1134 1226
1412 1419 1438 1466 1473 1540 1549 1596 1597 1682 1710
1723 1736 1737 1760 1797 1835 1897 1920 1945 1957 1959
2306 2308 2548 2597 2638 2639 2689 2694 2717 2735 2776
2800 2819 2836 2852 2882 2999 3005 3384 3395 3470 3714
3766 3780 4286 4329 5732 5771 5777 5785 5788 5936 6037
6074

LEAD

141 291 423 1101 1124 1150 1212 1340 1427 1486 1911
2251 2614 2689 2812 2965 4230 4319

LITHIUM

82 110 158 196 219 256 261 300 397 455 530 728 782 784
841 949 981 1070 1351 1528 1576 1618 1787 1801 1857
1906 2251 2385 2543 2755 2927 3059 3126 3376 3793 5854
6056

LUTETIUM

103 115 224 267 439 588 676 688 704 705 713 767 1014
1042 1226 1344 1710 1835 1945 1959 2621 2689 2694 2735
3384 3397 3780 4301 5771 5936 5962

MAGNESIUM

54 55 56 87 98 141 205 290 328 382 442 455 509 580 581
622 635 638 648 659 707 760 821 845 848 850 851 961 966
1086 1087 1139 1165 1193 1217 1226 1384 1400 1409 1460
1611 1616 1649 1708 1710 1785 1893 1912 1975 2306 2434
2445 2499 2508 2526 2551 2689 2690 2707 2871 2945 3075
3383 3388 3461 3483 3724 3790 3793 3976 3985 4193 4198
4258 4272 5383 5384 5743 5759 5924 5977 5978 6056 6067

MANGANESE

4 5 54 55 56 59 64 68 78 80 81 83 88 97 103 130 140 141
149 166 167 175 189 205 215 238 246 252 271 290 291 291
301 322 331 351 357 419 422 433 442 454 502 509 516 531
544 552 561 564 573 581 586 625 635 637 640 641 648 651
652 662 665 686 688 699 702 704 706 709 710 714 717 718
726 735 760 767 775 777 789 806 810 813 815 829 830 834
845 848 849 850 862 879 882 893 895 896 897 899 902 903
919 920 929 933 934 938 941 942 966 968 969 977 985 987
992 995 1045 1048 1068 1073 1086 1088 1089 1093 1098
1099 1105 1107 1112 1114 1118 1124 1129 1138 1141 1162
1166 1171 1191 1192 1193 1204 1206 1207 1226 1245 1251
1254 1255 1263 1264 1267 1269 1272 1277 1319 1332 1354
1376 1384 1406 1419 1434 1441 1442 1443 1456 1460 1466
1471 1477 1487 1492 1495 1510 1513 1540 1542 1558 1559
1572 1606 1611 1616 1636 1642 1699 1700 1703 1705 1708
1709 1710 1723 1725 1736 1737 1744 1746 1749 1766 1767
1769 1781 1789 1795 1800 1805 1813 1817 1819 1825 1828
1832 1833 1840 1857 1897 1965 1975 2125 2141 2157 2306
2337 2369 2426 2481 2495 2498 2502 2508 2511 2523 2534
2535 2548 2550 2559 2573 2578 2579 2597 2601 2685 2688
2689 2690 2699 2707 2717 2721 2723 2725 2733 2735 2739
2751 2753 2766 2769 2795 2801 2804 2821 2845 2846 2848
2852 2876 2882 2892 2931 2950 2963 2966 3062 3344 3365
3369 3382 3383 3470 3483 3710 3713 3723 3727 3804 3957
3964 3988 4191 4232 4263 4285 4286 4291 4293 4306 4310
4315 4317 4329 4374 5335 5343 5368 5370 5386 5390 5500
5501 5510 5571 5591 5619 5697 5713 5725 5726 5759 5766
5771 5785 5792 5864 5869 5924 5936 5941 5944 5955 5972
5977 5981 5996 6003 6006 6016 6037 6055 6067

MERCURY

82 103 145 146 166 167 252 302 317 460 504 509 520 533
570 571 614 625 631 636 674 688 689 706 717 740 799 824
879 882 894 942 977 1005 1014 1045 1105 1118 1134 1181
1182 1212 1221 1224 1226 1239 1247 1255 1277 1288 1340
1409 1412 1462 1471 1477 1479 1497 1553 1568 1603 1699
1710 1737 1746 1797 1825 1894 1920 1969 2296 2308 2403
2430 2447 2508 2548 2563 2565 2572 2638 2639 2689 2699
2707 2715 2739 2769 2776 2819 2838 2852 2999 3084 3360
3376 3774 3789 3791 3808 3957 3989 4153 4214 4232 4267
4268 4285 5327 5390 5447 5499 5510 5698 5725 5728 5771
5785 5792 5808 5860 5944 5977 6003 6008 6037 6061 6080

MOLYBDENUM

66 68 103 116 140 165 166 167 205 246 291 322 328 398
409 442 504 508 509 575 641 688 704 726 758 760 767 773
799 804 810 820 870 879 980 1045 1086 1118 1124 1133
1134 1135 1150 1165 1190 1191 1215 1220 1234 1254 1275
1291 1340 1412 1442 1456 1471 1472 1477 1484 1515 1592
1616 1699 1709 1710 1715 1727 1786 1797 1832 1844 1907
1910 1920 1965 2308 2369 2495 2508 2523 2550 2638 2639
2689 2699 2717 2735 2769 2776 2819 2836 2852 2871 2881
2882 3059 3383 3487 3732 3808 3964 3982 4232 4253 4411
5785 5808 6003 6008

NEODYMIUM

103 115 267 439 688 704 767 1042 1226 1710 1835 1945
1957 1959 2498 2597 2689 2735 2999 3087 3384 3395 4250

NEON

528 1891 2689

NICKEL

4 5 78 81 83 103 140 141 149 166 167 174 205 270 282
287 291 291 322 352 390 419 462 470 471 482 502 508 509
531 544 614 616 635 641 662 674 688 704 724 755 760 767
789 804 810 815 818 845 879 896 919 928 1027 1045 1117
1118 1124 1138 1165 1167 1190 1191 1193 1226 1240 1254
1354 1375 1398 1441 1456 1471 1477 1515 1526 1559 1614
1616 1699 1703 1709 1710 1717 1725 1727 1737 1785 1832
1965 1973 2369 2495 2508 2523 2548 2550 2578 2601 2619
2658 2673 2689 2723 2724 2744 2769 2950 3383 3418 3661
3957 3964 4272 4308 5345 5368 5386 5448 5500 5619 5759
5788 5955 5981 6037

NIOBIUM

89 197 353 419 697 1102 1137 1172 1201 1226 1232 1340
1410 1518 1538 1582 1710 1911 2499 2502 2611 2689 2690
2830 3560 3793 4411

ACTIVATION ANALYSIS-ELEMENT DETERMINED

NITROGEN

49 201 346 423 495 497 499 637 696 703 704 712 716 760
811 814 841 1065 1263 1312 1408 1442 1599 1670 1680
1738 1778 1816 1823 1849 1857 1896 1898 1939 2129 2298
2384 2505 2524 2550 2569 2661 3059 3070 3364 3474 3976
3995 4193 4211 5238 5420 5442 5782 6056

OSMIUM

221 222 224 226 347 352 683 1076 1095 1119 1134 1226
1340 1431 1492 1502 1710 1797 1920 2689 2766 4312 5436
5717 5719 5940

OXYGEN

29 38 45 46 49 58 69 74 75 105 108 109 113 131 153 160
199 201 285 391 403 423 423 426 455 495 497 500 519 549
567 578 591 596 611 623 629 637 638 654 655 659 695 703
712 716 756 762 770 771 811 814 839 841 843 860 863 867
868 912 913 921 959 977 1023 1055 1060 1065 1067 1071
1075 1103 1104 1116 1151 1158 1190 1194 1229 1238 1248
1252 1256 1258 1263 1294 1297 1309 1312 1318 1330 1394
1399 1414 1424 1437 1442 1450 1453 1483 1491 1509 1522
1530 1532 1589 1598 1604 1646 1649 1668 1675 1686 1704
1713 1721 1730 1739 1742 1773 1778 1798 1802 1804 1811
1814 1816 1823 1831 1857 1887 1889 1896 1900 1904 1906
1912 1915 1939 1950 1954 1956 1979 2129 2297 2298 2381
2418 2453 2498 2504 2505 2506 2507 2518 2526 2540 2542
2543 2549 2550 2562 2580 2586 2591 2598 2608 2615 2634
2649 2668 2678 2684 2686 2726 2734 2749 2764 2772 2774
2798 2802 2933 2948 2949 2965 2983 3063 3070 3073 3077
3085 3090 3355 3357 3461 3502 3553 3711 3718 3721 3722
3727 3729 3746 3753 3768 3771 3783 3790 3793 3810 3965
3970 3973 3976 3977 3981 3986 3992 4193 4196 4197 4198
4209 4211 4226 4260 4277 4386 5238 5321 5322 5330 5353
5380 5384 5409 5431 5432 5435 5442 5450 5451 5452 5708
5752 5768 5769 5772 5780 5781 5921 5923 5938 6053 6065
6066 6072

PALLADIUM

28 84 103 166 167 187 262 352 462 525 544 545 588 662
676 705 724 760 776 879 997 1176 1226 1235 1275 1458
1539 1581 1693 1699 1710 2689 2839 3810 4253 4312 5307
5436 5619 5703 5717

ACTIVATION ANALYSIS-ELEMENT DETERMINED

PHOSPHORUS

4 22 35 47 54 56 123 140 161 189 223 243 244 246 255
328 385 398 414 419 438 442 443 455 504 508 509 553 588
591 638 641 652 676 688 689 699 704 705 706 714 716 767
829 830 864 869 871 892 893 894 921 936 954 975 976 977
979 985 1045 1057 1078 1085 1086 1118 1124 1134 1165
1166 1177 1190 1193 1198 1215 1223 1237 1242 1311 1342
1344 1412 1441 1442 1456 1471 1477 1520 1534 1552 1601
1614 1670 1694 1709 1710 1738 1747 1752 1762 1766 1767
1778 1780 1797 1815 1818 1832 1870 1892 1896 1899 1907
1937 1939 1948 1965 2052 2129 2148 2384 2386 2474 2498
2508 2523 2550 2633 2638 2657 2680 2689 2705 2721 2748
2759 2764 2819 2849 2852 2871 2931 2945 2965 2969 2999
3383 3469 3716 3736 3997 4193 4207 4273 4388 5357 5370
5395 5405 5406 5472 5499 5731 5785 5793 5927 5981 6004
6012 6056 6063 6086

PLATINUM

9 205 352 509 544 545 588 631 662 676 705 741 776 817
824 1014 1045 1118 1134 1176 1226 1235 1458 1512 1566
1649 1693 1710 1797 1920 2639 2717 5436 5619 5717 5942
5984 6024

PLUTONIUM

326 336 841 1357 1906 1921 2553 2689 2998

POTASSIUM

22 35 54 55 56 73 79 103 123 166 167 189 205 246 259
268 290 300 371 414 419 429 442 493 538 541 553 637 652
662 686 688 699 702 704 739 815 845 848 849 879 888 894
903 923 933 934 1045 1048 1086 1089 1131 1165 1190 1193
1226 1263 1311 1344 1354 1395 1419 1466 1472 1477 1510
1552 1558 1559 1597 1660 1699 1707 1710 1719 1746 1785
1896 1898 1963 2508 2523 2550 2673 2689 2707 2727 2797
2819 2852 2876 2945 2965 2973 2999 3059 3081 3334 3368
3383 3393 3483 3669 3736 3769 3775 3791 3810 3990 4193
4198 4240 4248 4262 4278 4315 5370 5384 5386 5422 5500
5571 5619 5697 5703 5785 5924 5936 5977 6005 6011 6056
6063 6067

PRASEODYMIUM

103 115 439 546 688 704 767 960 1115 1226 1710 1835
1945 1957 1959 1978 2498 2689 2735 3087 3328 3397 4301

PROMETHIUM

6057

PROTACTINIUM

1439 2889

RADIUM

1439

RHENIUM

85 86 165 186 205 224 226 362 409 511 600 677 683 686
713 758 768 810 964 1045 1226 1431 1478 1502 1584 1585
1655 1710 1727 1760 1803 2296 2350 2431 2689 2811 2902
3384 3414 4310 4311 5592 5619 5703 5719 5857 6054

RHODIUM

344 352 436 631 697 713 824 941 1014 1055 1172 1226
1228 1710 2689 2966 3793 4312

RUBIDIUM

54 55 56 79 93 96 103 138 166 167 290 300 328 460 462
469 477 504 588 614 676 688 705 741 790 810 815 815 824
852 879 968 999 1027 1042 1045 1055 1089 1134 1190 1197
1222 1226 1265 1332 1412 1449 1466 1477 1512 1597 1699
1710 1727 1737 1766 1797 1800 1817 1920 1952 1973 2308
2508 2523 2548 2550 2614 2638 2639 2689 2735 2776 2819
2852 2871 2999 3383 3468 3483 3775 4214 4310 5369 5728
5771 5785 5936 5977 5981 6037

RUTHENIUM

205 347 352 358 588 676 705 1076 1086 1147 1226 1235
1425 1492 1710 2689 2766 2836 4255 4312 5311 5717 5940

SAMARIUM

79 103 115 139 252 267 343 395 419 433 439 504 572 585
688 704 713 767 806 920 948 958 998 1036 1038 1042 1226
1245 1329 1338 1466 1549 1596 1682 1700 1710 1723 1737
1785 1835 1897 1920 1945 1957 1959 2308 2597 2638 2639
2664 2689 2694 2776 2800 2819 2852 2999 3395 3470 3714
3780 3811 4286 5771 5785 5788 5936 6074

SCANDIUM

39 103 140 227 238 252 257 433 509 528 572 587 588 604
614 637 640 659 676 688 704 704 705 713 735 767 789 806
810 815 824 834 879 920 942 964 977 987 1011 1042 1045
1055 1134 1165 1196 1226 1245 1251 1263 1273 1277 1319
1338 1354 1412 1419 1438 1454 1456 1466 1469 1471 1472
1477 1492 1493 1540 1564 1596 1649 1699 1700 1710 1723
1727 1736 1741 1746 1760 1795 1797 1813 1817 1860 1897
1920 1945 1965 1970 2283 2296 2306 2308 2430 2447 2474
2550 2559 2597 2601 2639 2689 2690 2694 2717 2732 2735
2739 2766 2776 2800 2819 2852 2888 2931 2950 2999 3005
3088 3396 3470 3957 4329 4381 5343 5369 5448 5500 5591
5728 5771 5785 5788 5934 5936 5939 5941 6012 6079

SELENIUM

103 148 166 167 174 284 328 387 407 419 434 504 542 549
562 588 592 607 614 625 631 674 676 688 705 706 707 709
717 726 753 792 810 824 844 852 879 894 1014 1024 1027
1055 1086 1118 1134 1138 1190 1203 1226 1300 1340 1349
1412 1442 1477 1567 1649 1654 1665 1699 1702 1710 1712
1737 1797 1894 1920 2296 2308 2403 2455 2503 2508 2548
2550 2638 2639 2644 2676 2689 2699 2707 2764 2776 2819
2852 2853 2871 2954 2999 3060 3418 3791 3808 3948 3954
3956 4214 4232 4268 4274 4305 4308 5307 5366 5619 5771
5785 5808 5864 5994 6012 6037

SILICON

4 54 56 81 98 102 113 141 285 291 417 419 423 452 497
517 518 555 580 591 612 622 623 628 637 641 665 695 712
716 810 838 850 851 881 921 944 961 1017 1190 1193 1263
1297 1414 1460 1535 1558 1559 1590 1591 1611 1642 1686
1709 1710 1721 1740 1785 1798 1818 1832 1843 1875 1889
1898 1912 1954 2354 2429 2498 2504 2506 2507 2526 2550
2596 2662 2684 2689 2735 2774 2865 2933 2940 2941 2956
2965 2987 3075 3355 3461 3753 3790 3976 3997 4005 4193
4198 4198 4205 4258 5383 5384 5416 5720 5739 5759 5776
5884 6086

ACTIVATION ANALYSIS-ELEMENT DETERMINED

SILVER

13 30 31 82 83 103 125 130 141 166 167 193 205 255 334
344 363 364 365 366 386 419 423 436 460 509 549 589 608
614 619 631 635 638 674 686 688 697 704 709 713 738 741
760 790 798 805 824 832 845 879 894 941 984 1014 1018
1027 1028 1036 1042 1045 1055 1066 1093 1095 1106 1111
1118 1123 1124 1129 1132 1134 1165 1166 1172 1190 1193
1226 1247 1275 1277 1320 1349 1354 1371 1375 1412 1466
1471 1472 1477 1478 1492 1512 1525 1542 1567 1584 1614
1615 1655 1672 1699 1702 1710 1712 1737 1797 1825 1830
1832 1873 1920 1953 1955 2144 2154 2308 2333 2447 2508
2511 2523 2548 2550 2612 2625 2639 2671 2689 2694 2699
2715 2766 2776 2819 2852 2966 2999 3059 3374 3383 3394
3418 3487 3738 3740 3810 3949 3957 3988 3998 4191 4214
4215 4230 4253 4303 4308 4328 5307 5344 5369 5394 5438
5579 5619 5703 5726 5728 5785 5808 5868 5870 5977 6012
6037 6061

SODIUM

4 6 7 22 29 35 54 55 56 73 79 102 103 104 107 123 136
141 155 166 167 174 175 189 205 215 237 238 246 252 259
274 275 290 300 328 330 370 371 382 385 398 400 413 414
417 418 419 423 429 432 433 442 450 454 455 467 487 488
489 509 511 521 541 544 553 555 561 564 606 625 635 637
641 652 659 662 686 688 699 702 704 706 707 714 730 735
760 767 775 789 810 812 829 830 831 834 842 845 848 849
850 853 879 887 888 894 895 903 923 933 934 939 942 945
961 966 968 969 977 979 992 993 995 1045 1055 1061 1063
1086 1089 1118 1134 1138 1165 1193 1216 1217 1226 1227
1251 1263 1269 1272 1283 1289 1311 1319 1332 1344 1351
1354 1376 1392 1395 1398 1419 1438 1452 1456 1460 1466
1471 1472 1477 1492 1495 1505 1510 1533 1540 1542 1552
1558 1559 1606 1616 1617 1649 1664 1699 1703 1707 1709
1710 1715 1725 1736 1737 1746 1751 1766 1780 1785 1800
1813 1819 1857 1897 1925 1936 1957 1968 1976 1983 2121
2141 2306 2365 2376 2422 2498 2502 2508 2519 2523 2548
2550 2579 2619 2651 2657 2662 2673 2680 2688 2689 2690
2707 2711 2717 2735 2751 2759 2766 2775 2797 2801 2819
2852 2871 2882 2963 2973 2999 3350 3365 3368 3369 3383
3470 3483 3708 3723 3736 3769 3791 3808 3964 3990 4191
4193 4198 4201 4216 4231 4248 4258 4263 4281 4283 4285
4286 4293 4329 4347 5326 5343 5370 5384 5390 5399 5402
5500 5510 5619 5697 5703 5725 5771 5785 5869 5924 5931
5936 5981 6005 6011 6014 6037 6055 6056 6062 6063 6067

ACTIVATION ANALYSIS-ELEMENT DETERMINED

STRONTIUM

22 54 55 56 67 68 80 103 166 167 214 236 290 442 459
460 469 483 484 485 588 595 614 631 635 676 688 697 704
705 708 714 723 788 803 810 815 829 830 856 879 963 968
1014 1045 1086 1088 1089 1134 1150 1170 1190 1226 1277
1281 1332 1334 1340 1665 1697 1699 1710 1727 1737 1766
1797 1800 1890 1982 2006 2523 2548 2550 2676 2689 2852
2977 2984 3383 3483 4272 4329 5500 5619 5755 5771 5785
5951 5991 6002 6016 6037 6055 6064 6067

SULFUR

22 37 140 141 291 423 437 495 497 588 591 641 652 659
676 688 699 704 705 706 716 767 892 893 897 921 937 977
1045 1057 1085 1124 1177 1193 1215 1218 1237 1354 1378
1455 1456 1471 1477 1479 1520 1559 1570 1601 1621 1649
1709 1711 1720 1778 1782 1785 1818 1857 1870 1898 1965
2129 2148 2149 2550 2689 2751 2764 2794 2849 2948 2963
3709 3716 3723 3793 4193 4227 4258 4285 4300 5510 5543
5923 6086

TANTALUM

9 26 51 97 103 145 147 166 167 179 197 265 266 291 319
367 371 390 419 508 509 544 575 614 637 641 662 688 698
704 729 760 789 799 820 849 870 879 887 896 910 955
1002 1045 1102 1118 1123 1127 1128 1137 1165 1166 1201
1226 1263 1319 1410 1434 1454 1478 1487 1518 1538 1582
1615 1616 1655 1699 1709 1710 1759 1803 1817 1829 1840
1966 2480 2496 2502 2523 2689 2690 2717 2830 3346 3383
3387 4310 4411 5500 5786 5936

TECHNETIUM

10 11 15 72 697 1220 2673

TELLERIUM

103 166 167 174 224 270 434 511 588 662 676 688 705 760
792 845 879 894 1118 1122 1226 1240 1246 1300 1412 1441
1477 1567 1603 1702 1710 1848 2537 2550 2640 2689 3730
3731 4321 5307 5336 5619 5716 5730 5948

TERBIUM

79 103 115 267 439 544 662 688 704 767 1042 1226 1324
1478 1649 1655 1710 1723 1803 1835 1945 1957 1959 2689
2694 3100 3395 3714 5771 5936

THALLIUM

89 133 141 146 255 363 365 411 419 697 815 869 883 1172
1212 1603 1710 2006 2525 2643 2689 3793 4221 4310 5619
5984

THORIUM

40 41 42 54 55 56 104 120 137 166 250 289 290 393 395
421 640 641 656 688 704 708 790 808 815 828 879 973
1042 1045 1090 1165 1180 1189 1226 1277 1361 1371 1391
1401 1404 1439 1454 1477 1494 1498 1531 1699 1709 1722
1723 1725 1746 1760 1774 1817 1842 1857 1906 2122 2437
2447 2550 2636 2714 2852 2882 2976 3105 3483 3958 4198
4203 4302 4391 5323 5328 5735 5771 5785 5788 5790 5867
5936 6069

THULIUM

115 439 544 588 662 676 705 713 811 1042 1226 1344 1478
1584 1655 1710 1803 1835 1945 1959 2689 3714 5308 5936

TIN

141 149 174 205 508 509 537 575 588 631 676 702 705 790
799 820 845 870 894 941 1042 1045 1113 1123 1124 1125
1133 1135 1165 1166 1191 1226 1349 1385 1564 1709 1710
1856 1863 2144 2296 2430 2523 2601 2640 2654 2689 2694
2717 2769 2950 3383 3730 3731 3793 4268 4328 5336 5344
5369 5619 5712 5977

TITANIUM

78 83 140 205 291 659 697 760 821 841 851 953 1124 1134
1172 1226 1340 1363 1375 1442 1501 1710 1797 1863 1898
1911 1965 2306 2499 2550 2628 2689 2689 2965 3355 3560
3793 4189 4211 4286 6065

ACTIVATION ANALYSIS-ELEMENT DETERMINED

TUNGSTEN

26 65 81 103 140 141 145 165 166 167 189 205 230 246
252 291 304 347 371 409 419 504 508 548 549 575 631 637
659 687 688 698 704 714 726 758 760 767 779 783 799 810
820 824 829 830 849 870 879 893 920 990 1042 1045 1055
1086 1093 1118 1118 1150 1155 1165 1169 1215 1226 1263
1332 1340 1363 1371 1406 1412 1471 1477 1487 1649 1693
1699 1709 1710 1727 1800 1817 1829 1840 1920 1965 2308
2480 2495 2496 2502 2523 2550 2614 2638 2639 2690 2717
2718 2769 2776 2819 2852 2882 2999 3379 3383 3384 3808
3810 3975 3997 4232 4411 5378 5385 5619 5703 5771 5785

URANIUM

14 52 53 120 142 143 151 166 167 209 213 217 233 252
269 288 290 321 326 327 329 332 349 377 393 410 412 419
448 449 461 472 490 492 511 514 530 564 572 588 614 640
641 656 676 688 692 704 705 708 728 737 760 790 808 810
819 824 828 841 866 879 880 909 920 946 952 971 1019
1025 1042 1059 1076 1079 1090 1109 1122 1124 1134 1180
1189 1190 1212 1226 1302 1325 1357 1361 1371 1389 1404
1428 1429 1439 1442 1468 1477 1478 1494 1498 1527 1531
1597 1607 1652 1699 1709 1723 1725 1727 1797 1817 1857
1865 1901 1906 1960 1973 2437 2474 2550 2673 2754 2852
3074 3391 3483 3755 3808 3958 3987 4198 4208 4381 5262
5323 5328 5343 5439 5447 5551 5716 5732 5735 5765 5771
5785 5788 5790 5867 5948 5953 5965 6012 6077

VANADIUM

47 68 80 81 89 107 140 165 205 230 257 301 305 409 419
468 509 598 607 635 637 638 641 686 687 690 697 702 704
752 758 760 781 797 810 821 824 849 851 883 893 895 941
1001 1086 1088 1093 1097 1145 1150 1172 1226 1254 1263
1289 1298 1313 1317 1319 1340 1442 1460 1471 1492 1526
1565 1631 1665 1709 1710 1727 1749 1788 1911 1938 1965
1980 2495 2499 2550 2601 2662 2689 2696 2707 2766 2950
3344 3713 3793 4191 4206 4232 4270 4314 5410 5701 5958
5970 5995 6003 6065

XENON

1412 1539 1891 2689

YTTERBIUM

115 267 439 588 641 676 705 713 1008 1021 1042 1055
1226 1344 1709 1710 1835 1882 1945 1959 2689 2694 2735
2931 3100 3384 3714 3780 5447 5771 5936 6043

YTTRIUM

103 115 227 267 291 544 631 659 662 688 704 760 767 879
1014 1055 1340 1374 1403 1413 1474 1596 1649 1699 1710
1725 1835 1945 1959 1978 2498 2550 2614 2657 2689 2735
3100 3997 4214 6079

ZINC

33 34 54 55 56 63 68 78 83 103 116 138 140 141 166 167
174 205 246 252 255 263 290 291 322 328 358 370 371 418
419 442 454 504 508 509 513 544 584 586 588 606 614 622
625 635 637 641 648 652 662 676 686 688 699 704 705 706
707 710 714 726 767 789 790 799 804 810 815 824 829 830
834 845 870 879 888 894 899 920 941 942 968 977 985 987
1005 1042 1045 1063 1068 1069 1086 1089 1105 1107 1113
1118 1123 1133 1134 1135 1138 1159 1165 1166 1190 1193
1210 1211 1215 1223 1240 1244 1254 1263 1273 1275 1277
1286 1307 1332 1344 1354 1373 1384 1411 1412 1432 1434
1438 1441 1456 1466 1469 1471 1472 1477 1492 1515 1564
1601 1613 1616 1645 1648 1670 1677 1678 1699 1703 1707
1708 1709 1710 1723 1736 1737 1738 1745 1766 1767 1797
1800 1815 1825 1828 1856 1920 1965 2124 2296 2308 2333
2386 2430 2447 2508 2509 2523 2534 2539 2548 2550 2578
2601 2613 2619 2638 2639 2640 2654 2665 2669 2673 2688
2689 2690 2699 2717 2718 2721 2739 2766 2769 2776 2801
2819 2848 2852 2870 2871 2876 2931 2950 2965 2999 3059
3061 3075 3382 3383 3418 3475 3483 3485 3487 3708 3723
3730 3731 3732 3740 3957 3961 4153 4232 4253 4263 4267
4286 4291 4308 4315 4329 5307 5336 5345 5369 5370 5383
5386 5390 5438 5448 5502 5619 5697 5703 5725 5728 5753
5771 5785 5808 5864 5869 5924 5944 5950 5977 5981 5991
5995 6003 6008 6012 6016 6037 6061 6067

ZIRCONIUM

9 24 83 103 166 167 176 212 232 398 507 509 588 614 641
676 688 704 705 767 815 879 988 1022 1045 1045 1124
1165 1173 1226 1375 1381 1410 1477 1481 1537 1646 1709
1710 1765 1860 2498 2550 2689 2717 2735 2965 3363 3488
4317 5500 5771 5936

ACTIVATION ANALYSIS-ELEMENT DETERMINED

RARE EARTHS

7 102 166 167 227 258 544 879 895 925 1015 1016 1045
1047 1187 1205 1235 1257 1323 1356 1404 1474 1477 1681
1774 1839 2145 2327 2369 2550 2741 2763 2932 3376 3383
3386 3395 3397 3732 3810 4219 4322 5347 5359 5500 5705
5706 5707 5778 5862 5873 5961 5963 5964 6049 6077 6079

LANTHANIDES

1205 1285

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APPENDIX III

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ACTIVATION ANALYSIS-MATRIX ANALYZED

AIR, ATMOSPHERE

184 185 476 562 966 1004 1036 1081 1083 1266 1543 1569
1874 1924 2553 2693 2981 2998 5397 5967 6017 6058

ARCHAELOGICAL SPECIMENS

13 351 533 561 619 1032 1132 1301 1306 1376 1897 1926
2495 2575 2762 2945 3738 3998 4230 4328 5579 5729 5742
5788

ART

1504 1825 1834 2589 2694 3988 6031 6061

BIOLOGICAL, GENERAL, INCLUDING VIRUS

35 47 59 68 80 123 155 192 214 284 308 310 317 320 425
476 486 541 592 594 595 638 651 709 717 811 839 848 894
930 939 965 975 976 999 1056 1086 1088 1100 1105 1120
1125 1190 1195 1198 1224 1241 1288 1296 1308 1317 1370
1389 1436 1439 1461 1506 1534 1567 1577 1625 1644 1660
1665 1668 1669 1687 1702 1703 1704 1705 1706 1762 1769
1781 1806 1873 1892 1894 1895 1899 1963 1970 1977 1982
2124 2126 2422 2426 2445 2520 2554 2563 2571 2584 2585
2603 2642 2657 2673 2707 2718 2738 2759 2791 2792 2793
2946 2964 2969 2971 2985 2998 3060 3078 3086 3360 3468
3469 3482 3503 3507 3508 3728 3769 3985 3989 4002 4004
4194 4207 4221 4261 4267 4274 4315 4376 4377 5358 5596
5626 5699 5760 5774 5785 5790 5808 5847 5848 5874 5926
5945 5947 5979 5980 5982 5983 5985 5986 5987 5988 5993
5994 5995 5997 5998 6014 6016 6024 6047 6051

BIOLOGICAL, BLOOD

33 34 62 63 64 66 123 138 237 263 308 328 335 383 405
476 486 489 533 542 560 570 648 657 710 730 845 862 882
929 938 962 993 1020 1041 1086 1089 1141 1143 1206 1211
1241 1242 1276 1305 1384 1412 1421 1436 1463 1470 1702
1707 1708 1712 1748 1750 1766 1767 1824 1858 1948 1975
1982 2123 2365 2503 2508 2535 2551 2563 2689 2690 2695
2696 2733 2871 3061 3358 3503 3669 3757 3789 3808 3955
3956 3959 4314 5386 5502 5755 5770 5972 5981 6001 6002
6008 6067

ACTIVATION ANALYSIS-MATRIX ANALYZED

BIOLOGICAL, URINE

50 214 476 483 484 487 673 702 866 880 894 943 962 1221
1241 1421 1702 1712 1858 1948 1964 2122 2534 2535 2551
2558 2689 2821 3503 5382 5755 5953 5972 6001

BIOLOGICAL, OTHER FLUIDS

178 208 385 418 450 476 560 772 788 932 1141 1206 1287
1392 1421 1645 1712 1747 1751 1824 1948 2125 2440 2535
2558 2733 2977 3503 3710 3957 5416 5472 5929 5972 6005
6009 6052 6055 6064

BIOLOGICAL, SOFT TISSUE, INCLUDES HAIR, NAILS, AND HOOFS

33 34 48 123 124 138 144 154 178 198 208 254 259 263
308 310 317 328 333 335 374 414 442 481 483 484 504 512
513 533 535 542 550 652 667 702 705 706 709 710 717 725
819 844 848 852 883 911 944 1001 1041 1078 1086 1088
1097 1100 1134 1172 1206 1225 1233 1250 1271 1276 1278
1310 1311 1326 1392 1400 1411 1412 1421 1439 1442 1452
1552 1563 1650 1692 1702 1712 1748 1752 1797 1858 1873
1893 1914 1920 1925 1937 2121 2308 2403 2434 2455 2503
2539 2546 2548 2551 2572 2588 2638 2639 2699 2719 2730
2756 2776 2786 2789 2797 2819 2853 2871 2881 2938 2942
2943 2999 3062 3098 3334 3388 3468 3503 3736 3745 3949
3956 3982 4190 4227 4232 4240 4281 4283 4374 5366 5386
5390 5393 5394 5435 5701 5727 5851 5869 5927 5944 5976
5977 5999 6006 6007 6011 6012 6013 6015 6063 6069

BIOLOGICAL, BONE, TEETH

79 136 194 308 378 413 485 512 521 675 709 714 741 829
830 856 968 1086 1100 1170 1332 1436 1439 1446 1457
1512 1697 1752 1780 1800 1873 1980 1982 2565 2573 2629
2633 2685 3503 3506 3725 3726 3958 3982 4319 6003 6004

BIOLOGICAL, FISH

164 165 409 757 758 1109 1172 1257 1395 1778 2668 2973
5746 6023

BIOLOGICAL, SHELL FISH

164 165 409 723 1087 1094 1257 1277 1395 1401 1457 1781
5726

ACTIVATION ANALYSIS-MATRIX ANALYZED

BIOLOGICAL, SEAWEED

164 165 409 810 1109 1727 2546 2732

BIOLOGICAL, LEAVES, NEEDLES

67 310 636 702 709 740 953 1086 1230 1234 1436 1930
2501 2773 2892 3391 3509 3791 4269 5370 5935

BIOLOGICAL, WOOD

333 1100 1114

BIOLOGICAL, OTHER BOTANICAL

62 63 65 66 160 317 454 459 520 533 553 571 636 702 709
723 740 773 804 810 811 866 880 933 934 1087 1108 1230
1274 1361 1484 1748 1749 1782 1805 1873 1970 1971 2347
2736 2876 2892 2929 3092 3341 3391 3508 3713 3714 3747
3791 3962 3991 4320 5327 5445 5571 5725 5924 5925 5978
5990 5991 6080

CELLULOSE - TEXTILES

317 333 402 573 717 1007 1057 1073 1087 1110 1114 1239
1472 1478 1583 1584 1888 2481 2493 2655 2803 5872

CEMENT

1917 2323 2934

CHROMATOGRAPHY AND ION EXCHANGE - PAPER, RESINS, REAGENTS, ETC,

511 1664 2141 4406 5407 5930

CLAYS

289 433 518 1385 1495 3370

COAL

57 113 477 612 1067 1414 1646 1798 1889 1898 2504 2507
2622 2933 2941 3076 3803 5621

ACTIVATION ANALYSIS-MATRIX ANALYZED

CORROSION PRODUCTS

97 482 4327

DETERGENTS

309

DRUGS

90 573 810 1077 1203 1205 1314 1746 2588 2648 2739 2805
4329 5751 5756

DUSTS

1036 1569 1606 1962

FOOD

339 476 588 676 699 702 705 707 709 935 963 1024 1057
1096 1788 1890 1913 1982 2563 2569 2689 2701 2736 2838
3092 3505 4323 5951 5984 5996 6024

FORENSIC, GENERAL

112 134 444 520 551 706 763 1031 1056 1149 1290 1689
2517 2603 2605 2607 2647 2673 2765 2958 2959 3486 3968
4006 5401 5710 6018 6020 6021 6027 6028 6030 6042

FORENSIC, HAIR AND FINGERNAILS

134 198 520 565 584 593 625 702 706 802 970 1422 1734
1736 1737 1928 2143 2517 2548 2570 2607 2765 2926 2958
3486 3708 4380 5358 5869 6019 6037 6038 6039 6040 6041

FORENSIC, POISONS

706 2517 2605 2607 2765 3486 5401

FORENSIC, GUNPOWDER RESIDUE

183 1034 1442 1732 2145 2464 2517 2605 2607 2765 2782
2790 2791 2792 2793 3065 3486 3504 5401 5750 6034 6035
6036

ACTIVATION ANALYSIS-MATRIX ANALYZED

FORENSIC, TRACE IDENTIFICATION

1035 1635 1715 1736 2144 2517 2605 2607 2645 2647 2648
2765 2782 2790 2791 2792 2793 2931 3486 3504 4263 4286
4329 5401 5543 6026 6029 6032 6033 6045 6048

GLASS

274 275 407 1117 1472 5566 5919 5933 5968 6033

INORGANIC COMPOUNDS (GENERAL)

79 82 130 196 200 205 313 437 438 499 514 519 631 659
670 702 712 824 825 845 986 1014 1028 1067 1072 1112
1116 1129 1202 1228 1248 1351 1404 1437 1510 1528 1711
1713 1720 1725 1774 1899 1939 1968 2052 2498 2543 2546
2845 2922 2989 4214 5499

IN-STREAM ANALYSIS

169 206 207 219 445 632 791 1055 1302 2006 2410 3753
4392 5578 5581 5748 5764

ISOTOPIC ANALYSIS

53 100 110 114 137 160 233 256 261 288 321 332 347 421
448 449 517 530 737 770 782 784 841 926 1012 1019 1023
1059 1062 1070 1079 1101 1357 1362 1377 1415 1416 1427
1442 1457 1532 1576 1668 1678 1704 1706 1726 1811 1857
1865 1872 1906 1914 1921 2303 2473 2540 2543 2546 2618
2627 2634 2687 2695 2727 2731 2737 2754 3074 3081 3102
3711 3959 3965 4208 5295 5435 5449 6043 6073

LIQUIDS, EXCLUDING WATER AND SEA WATER

279 573 1107 1351 1361 1374 1442 1879 1882 2511 3374
3379 3393

METALS AND ALLOYS (GENERAL)

3 80 241 264 279 346 408 426 453 500 591 631 655 703
704 707 712 755 756 805 806 819 821 824 921 1030 1060
1067 1088 1093 1103 1113 1124 1190 1193 1321 1361 1438
1441 1460 1522 1604 1739 1849 2480 2550 2562 2662 2678
2686 2802 2922 2936 2949 2970 2978 3070 3090 3502 3746
3768 3977 4196 4197 4211 4215 5426 5772 5932 5968

ACTIVATION ANALYSIS-MATRIX ANALYZED

METEORITES AND TEKTITES

9 26 39 40 41 42 84 85 86 96 142 143 145 146 158 186
187 199 209 212 217 226 268 269 410 411 412 434 436 439
469 470 490 493 528 529 548 563 587 616 683 698 721 736
768 776 778 779 817 964 988 1002 1010 1012 1017 1022
1076 1101 1117 1122 1145 1155 1168 1169 1172 1173 1174
1176 1187 1209 1210 1212 1214 1222 1251 1275 1297 1307
1323 1356 1381 1386 1431 1433 1486 1493 1494 1498 1502
1566 1571 1634 1693 1718 1719 1793 1813 1954 1959 2296
2338 2474 2506 2509 2641 2735 2774 2991 3352 3467 3476
3774 4253 4268 4290 5262 5307 5343 5365 5448 5591 5716
5717 5718 5719 5720 5721 5759 5775 5884 5948 5958 6050

MINERALS

10 11 15 72 73 96 98 104 120 121 122 151 171 189 222
224 225 239 240 249 250 354 360 366 380 393 397 429 461
469 478 486 522 548 562 683 695 735 739 742 750 783 841
924 941 1015 1016 1081 1082 1083 1092 1094 1107 1109
1137 1178 1213 1216 1280 1293 1294 1356 1381 1393 1403
1427 1431 1432 1433 1435 1454 1457 1458 1460 1466 1474
1480 1495 1513 1518 1527 1528 1538 1549 1550 1566 1652
1678 1817 1859 1863 1885 1906 1952 1970 1978 2318 2354
2431 2526 2636 2644 2669 2684 2688 2690 2720 2747 3366
3367 3375 3386 3387 3395 3414 3460 3501 3740 3766 4282
5320 5325 5343 5350 5406 5592 5705 5706 5707 5767 5852
5934 5949 5961 5962 5963 5965 6074

ORES

14 120 147 169 170 172 210 213 249 265 266 289 291 301
329 349 380 445 479 546 554 562 612 616 621 630 665 677
695 717 728 768 819 855 908 971 978 984 1011 1025 1047
1081 1082 1083 1102 1111 1137 1150 1162 1190 1195 1196
1280 1334 1340 1356 1374 1413 1435 1458 1521 1527 1550
1551 1553 1554 1555 1556 1581 1611 1623 1651 1671 1677
1857 1859 1886 1906 1955 1961 1978 2283 2348 2350 2444
2499 2688 2690 2747 2801 2888 2904 2940 2965 2966 3063
3076 3105 3342 3362 3371 3372 3373 3374 3376 3379 3385
3395 3460 3462 3464 3473 3501 3739 3760 3803 3948 3976
4005 4214 4307 4309 4311 5323 5356 5428 5551 5581 5761
5767 5950 6054

ORGANIC COMPOUNDS

80 192 205 323 403 498 519 591 696 702 709 711 827 839
863 871 895 921 928 986 1042 1045 1071 1072 1084 1096
1103 1112 1116 1138 1139 1218 1238 1259 1288 1437 1455
1456 1462 1472 1478 1479 1491 1509 1510 1519 1529 1534
1539 1595 1617 1655 1670 1694 1728 1743 1744 1745 1819
1870 1896 1902 2379 2433 2519 2524 2543 2562 2661 2794
2921 3033 3364 3365 3482 3505 3709 3716 3723 3729 3778
3954 3986 4205 4216 5326 5420 6085

ORGANOMETALLIC COMPOUNDS

2519 2543 3075 5357

PARTICLES

43 735 916 1036 1326 1439 1460 1606 1902 2976

PESTICIDES

702 1056 2790 3505 3791 5975

PETROLEUM AND DERIVATIVES

80 89 107 567 702 797 1088 1172 1254 1443 1535 1565
1572 1601 1738 1789 1815 1896 1899 2337 2452 2518 2619
2651 2705 2740 3027 3028 3365 3505 3752 4270 4285 5383
5510 5923 5970

PHOTOGRAPHIC FILM AND MATERIAL

334 738 3394

PLASTICS

21 37 105 605 702 860 942 977 1065 1088 1097 1492 1514
1519 1764 1831 2518 2657 2689 2711 2766 3781 3973 4209

PROCESS CONTROL

1586 1590 2666 5969

PROTEIN

134 709 1342 2129 5395 5405 6000 6001 6068

ACTIVATION ANALYSIS-MATRIX ANALYZED

QUARTZ

205 302 623 689 799 888 927 1065 1495 1505 1610 1655
2717 2728 3369 3759 5353 5402 5865 6062

REACTOR MATERIALS

234 349 419 708 717 726 735 974 1042 1171 1192 1204
1357 1902 5765

REAGENTS

300 1069 1072 1135 1136 1265 1636 1862 2518 2717 5335

REFRACTORIES AND CERAMICS

1540 2664 3488 6077

ROCKS

9 10 11 26 96 98 120 199 204 212 240 257 269 285 301
361 362 363 365 367 455 461 462 470 478 522 523 524 525
526 538 548 555 572 575 580 587 595 600 616 656 669 695
724 728 739 742 748 750 779 810 819 820 841 909 922 941
949 953 969 984 999 1002 1007 1022 1025 1047 1076 1080
1081 1082 1083 1094 1107 1109 1121 1125 1128 1145 1169
1180 1182 1185 1201 1209 1210 1213 1229 1293 1294 1297
1340 1356 1374 1383 1385 1393 1416 1419 1431 1432 1433
1445 1449 1454 1474 1480 1495 1518 1531 1537 1538 1550
1558 1559 1571 1585 1596 1615 1678 1693 1711 1718 1727
1812 1817 1835 1857 1885 1887 1899 1902 1911 1930 1953
1960 1970 2146 2283 2340 2348 2354 2437 2447 2453 2603
2636 2641 2669 2684 2694 2705 2720 2731 2735 2747 2750
2763 2839 2902 2965 2966 2991 3079 3081 3088 3089 3366
3367 3368 3371 3387 3395 3414 3461 3462 3470 3481 3501
3560 3774 3780 3790 3803 3961 3987 4192 4195 4242 4262
4278 4290 4305 4388 5322 5328 5406 5428 5436 5439 5449
5501 5713 5729 5731 5739 5743 5747 5767 5852 5867 5884
5934 5936 5939 5959 5960 6079

SEDIMENTS, MARINE

9 204 212 470 471 477 616 810 819 961 964 1002 1094
1128 1385 1727 1970 5771 5776

SEMI-CONDUCTOR MATERIALS

149 216 457 473 509 544 583 702 707 785 838 888 892 894
1063 1118 1133 1135 1253 1286 1354 1438 1441 1823 1855
1862 1907 1930 2523 3350 3485 3514 3993 3995 4153 4321
5399 5437 5703 5928 5931 6053

SOILS & FERTILIZERS

67 98 175 329 454 616 804 810 848 904 905 991 1011 1131
1195 1196 1361 1419 1515 1642 1782 1794 1874 1896 1899
1970 2552 2553 2590 2603 2705 3005 3091 3093 3345 5697
5990

SPACE APPLICATIONS, LUNAR

253 545 658 996 1033 1052 1284 1721 1785 1912 2364 2684
3461 4198 4289 5261 5384 5440

STABLE TRACERS

1048 1799 5966 5967 5992 6010 6058

STEEL AND CAST IRONS

87 88 118 119 223 304 305 351 353 356 357 417 428 552
581 620 626 687 690 717 718 810 893 903 915 940 990
1026 1085 1093 1097 1102 1124 1201 1204 1274 1363 1367
1394 1426 1434 1453 1468 1473 1522 1537 1541 1589 1590
1598 1642 1711 1717 1740 1760 1773 1786 1821 1837 1844
1875 1910 1911 1950 1951 1956 2418 2429 2507 2526 2537
2542 2586 2596 2611 2615 2649 2652 2678 2764 2795 2846
2983 3357 3466 3560 3746 3750 3981 3997 4413 5238 5378
5380 5389 5408 5450 5451 5452 5708 5766 6086

SURFACE ANALYSIS

29 423 1915 2562 2948 3070 3992 4000 5543 6066

THIN FILMS

508 654 1060 1156 1380 1496 1899 2658 3064 3126 3973
3992

ACTIVATION ANALYSIS-MATRIX ANALYZED

WATER

54 55 56 125 126 206 207 250 290 300 333 686 735 843
853 868 937 959 981 1008 1021 1027 1062 1070 1109 1129
1135 1181 1190 1217 1237 1255 1266 1294 1351 1361 1435
1497 1528 1532 1725 1758 1814 1857 1874 1906 1973 1979
2157 2540 2543 2551 2656 2665 2666 2673 2689 2693 2717
2800 2852 2873 2930 3084 3483 3808 3962 3965 3969 4258
4272 4302 4412 5749 5858 5919 5920 6016

WATER, SEA

164 235 236 422 475 477 492 586 614 723 810 1125 1127
1266 1345 1385 1402 1457 1688 1727 1874 1906 1945 2157
2511 2673 2693 2790 2791 2792 2793 2848 2984 3960 3969
4219 4244 4255 4291 4381 5359 5387 5397 5777 5873

WELL LOGGING

695 780 786 1061 1430 1554 1555 1559 1680 1683 1684
1685 1686 1772 1822 1843 3462 4252 5552 5554 5555 5577

LITHIUM AND ITS ALLOYS AND COMPOUNDS

467 869 1351 1568 2369 2726 3986

AMMONIUM COMPOUNDS AND ALKALI METALS AND THEIR ALLOYS AND COMPOUNDS (EXCLUDING LITHIUM)

93 131 133 460 635 708 729 852 869 1123 1190 1197 1281
1292 1330 1424 1514 1560 1761 1801 1816 1900 2596 2598
2726 2734 2758 2804 3085 3393 4209 4386 5341 5410 5422
6044

BERYLLIUM AND ITS ALLOYS AND COMPOUNDS

45 46 49 58 69 74 105 108 109 291 314 391 472 578 596
623 637 640 789 814 849 850 983 1043 1081 1083 1104
1177 1189 1191 1226 1235 1263 1318 1347 1351 1361 1429
1442 1528 1637 1710 1730 1741 1816 1861 1871 1904 2505
2549 2777 3073 3727 3976 5593

MAGNESIUM AND ITS ALLOYS AND COMPOUNDS

22 300 635 899 1190 1231 1274 1351 1398 1483 1801 2798
3357 3488 3981 4201 5941

CALCIUM, STRONTIUM AND BARIUM AND THEIR ALLOYS AND COMPOUNDS

635 1188 1466 1725 1726 1816 1872 2511 3396 4276 5353

BORON AND ITS ALLOYS AND COMPOUNDS

1136 1816 3369 4260

ALUMINUM

4 6 7 80 102 103 161 166 167 252 300 317 349 358 371
398 416 417 432 531 533 544 578 662 688 708 726 735 767
781 790 806 812 814 815 821 834 851 866 879 880 881 883
895 920 979 982 1042 1088 1097 1098 1099 1226 1245 1264
1273 1325 1338 1339 1398 1406 1420 1442 1469 1473 1526
1564 1591 1598 1618 1632 1700 1710 1723 1795 1804 1856
1901 1929 1960 1974 2358 2550 2559 2579 2597 2601 2628
2654 2683 2769 2950 3059 3382 3396 3721 3722 3724 3771
3791 3797 3992 4203 4298 5369 5409 5432 5729 5863 5865
5919 5921 5922 6024

ALUMINUM ALLOYS AND COMPOUNDS

78 83 161 234 238 384 400 451 533 806 823 853 864 899
987 989 1093 1099 1140 1167 1190 1220 1274 1725 2865
2927 2956 3487 4211 5353

TITANIUM AND ITS ALLOYS AND COMPOUNDS

51 75 81 291 319 1067 3357 3783 3799 3981 5431 5781
6065

ZIRCONIUM AND ITS ALLOYS AND COMPOUNDS

24 176 231 252 287 291 319 325 375 494 641 726 760 762
814 821 851 879 895 899 967 1003 1065 1067 1097 1190
1236 1309 1377 1410 1442 1471 1537 1573 1574 1578 1612
1642 1646 1699 1709 1765 1931 2381 2550 2970 3721 3996
4000 5177 5515 5517 5938

HAFNIUM AND ITS ALLOYS AND COMPOUNDS

176 232 507 1375 1481 1537 1765 2381 5938

NIOBIUM AND ITS ALLOYS AND COMPOUNDS

51 105 265 266 319 641 896 910 1102 1165 1487 1709 1759
1829 1840 1966 1983 2502 3059 3346 5781 5782 5786

TANTALUM AND ITS ALLOYS AND COMPOUNDS

51 912 1045 1102 1165 1232 1442 2502

CHROMIUM, VANADIUM AND MANGANESE AND THEIR ALLOYS AND COMPOUNDS

130 585 1289 1333 1501 1570 2473 5385 6065

MOLYBDENUM AND ITS ALLOYS AND COMPOUNDS

205 331 1760 1803 2381 3990 5321 5938 6071

TUNGSTEN AND ITS ALLOYS AND COMPOUNDS

116 205 242 955 980 1045 1227 1283 1340 1592 1597 1842
2381 3775 3810 3990 4231 5444 5732 5740 5938 6071

IRON AND ITS ALLOYS AND COMPOUNDS (EXCLUDING STEELS AND CAST IRONS)

4 5 8 118 119 130 140 166 167 179 271 319 401 443 452
490 502 516 537 544 578 662 688 744 767 851 879 896 906
1045 1067 1125 1150 1219 1226 1267 1298 1313 1339 1344
1375 1442 1621 1770 1875 1910 1938 1965 2358 2644 2658
2744 3785 3975 4189 4322 5336 5349 5430 5728 5954

COBALT AND ITS ALLOYS AND COMPOUNDS

130 545 823 1156 1167 1828

NICKEL AND ITS ALLOYS AND COMPOUNDS

28 544 635 662 852 892 1009 1124 1167 1262 1442 1613
1827 2658 3976 5712

COPPER AND ITS ALLOYS AND COMPOUNDS

130 153 384 589 754 851 956 995 1004 1067 1190 1299
1375 1378 1477 1728 1763 1896 2537 2550 2887 3418 4277
4308 5403 5415

ACTIVATION ANALYSIS-MATRIX ANALYZED

ZINC AND ITS ALLOYS AND COMPOUNDS

31 32 44 117 141 180 202 229 272 360 584 608 635 798
832 957 1000 1018 1398 1633 1689 1763 2358 2525 2683
2723 2724 2725 2796 3084 3994 4303 5447 5922 5955

GALLIUM, INDIUM AND THALLIUM AND THEIR ALLOYS AND COMPOUNDS

141 229 622 825 867 894 957 1005 1045 1068 1159 1190
1648 1675 2358 2721 3730 3731 4217 4321 5500 5703 5753
5928 6024

CADMIUM AND ITS ALLOYS AND COMPOUNDS

30 31 141 832 1331 1525 1936 2625

SILVER, GOLD AND MERCURY AND THEIR ALLOYS AND COMPOUNDS

105 130 211 344 544 589 662 774 997 1095 1106 1111 1132
1599 1641 1787 5704

PLATINUM AND ITS ALLOYS AND COMPOUNDS

2 135 205 221 262 364 451 601 727 774 792 907 1146 1147
1183 1184 1344 2644 3473 3810 5940

RHENIUM, RUTHENIUM, OSMIUM, RHODIUM, IRIDIUM AND PALLADIUM AND THEIR ALLOYS AND COMPOUNDS

135 221 344 774 1119 1260 1425 1539 2515 2644 2671 3530
5311 5363 5364 5868

CARBON, GRAPHITE, DIAMOND

115 139 163 241 291 468 607 752 819 848 945 946 992 994
1090 1161 1201 1269 1319 1408 1478 1618 1653 1725 1760
1787 1818 1839 1860 2306 2717 2772 2865 3474 3995 5863
5919 6071

ACTIVATION ANALYSIS-MATRIX ANALYZED

SILICON AND ITS ALLOYS AND COMPOUNDS (EXCLUDING QUARTZ)

12 105 149 181 193 244 245 246 255 279 319 322 371 379
390 473 491 509 544 602 606 623 662 803 805 818 831 853
864 869 870 881 887 888 892 894 913 922 1013 1091 1118
1121 1142 1151 1153 1166 1194 1207 1208 1223 1272 1304
1438 1441 1546 1547 1561 1587 1588 1616 1742 1760 1820
1831 1855 1899 1907 1930 1974 2358 2376 2386 2523 2578
2712 2717 2923 3361 3383 3384 3514 4224 4347 5353 5399
5429 5619 5787 5793 5931 6053 6072

GERMANIUM AND ITS ALLOYS AND COMPOUNDS

248 370 465 474 501 544 662 689 818 892 1045 1156 1243
1244 1291 1442 1548 1679 1862 1907 2154 2430 2497 2578
2712 2717 3485 3732 3993 4321 5330 5752 5769 6053 6072

TIN AND ITS ALLOYS AND COMPOUNDS

141 319 1018 1976 2358 4298

LEAD AND ITS ALLOYS AND COMPOUNDS

105 130 141 249 384 424 608 623 692 775 798 886 950
1064 1066 1074 1500 1533 1598 1763 1830 1841 1856 1901
1930 2154 2643 2654 2715 2717 3396 3788 3804 5344 5345
5381 5398

PHOSPHORUS AND PHOSPHATES

174 902 919 936 954 1344 2680 2721 4191 4293 5438

ARSENIC AND ANTIMONY AND THEIR ALLOYS AND COMPOUNDS

270 544 662 852 985 1441 1570 1754 2640 2713 2721 2878
4321 5787 5928

BISMUTH AND ITS ALLOYS AND COMPOUNDS

215 544 608 662 777 798 894 1320 1441 1542 1672 1760
1763 1969 2610 2612 2613 2812 3396

SULFUR

148 387 431 607 753 1654 1862

SELENIUM AND TELLURIUM AND THEIR ALLOYS AND COMPOUNDS

330 544 662 674 858 894 1215 1240 1246 1247 1300 1373
1520 1603 1628 1725 1760 1848 2775 2813 4254 4299 4300
5730

RARE EARTHS AND THEIR ALLOYS AND COMPOUNDS (INCLUDING SC + Y)

115 188 225 227 228 258 267 343 395 396 544 604 662 948
958 960 1008 1011 1015 1016 1021 1115 1195 1196 1199
1324 1329 1344 1403 1413 1648 1722 1802 1803 1882 1957
1985 2480 2496 2621 2920 2932 3100 3397 3770 3810 4226
4250 4322 4325 5308 5347 5778 5964

HALOGENS

243 923 1725 2982

NOBLE GASES

1004 1539 1543 4301

URANIUM, THORIUM AND PLUTONIUM AND THEIR ALLOYS AND COMPOUNDS

52 105 151 233 252 327 346 737 771 813 822 824 952 973
998 1019 1038 1059 1079 1109 1256 1318 1357 1391 1428
1442 1607 1614 1653 1681 1682 1725 1730 1803 1832 1833
1857 1865 1921 2441 2480 2496 2714 2741 2752 2753 2754
2836 2844 2870 2882 3074 3661 3811 3841 3964 4208 4249
4391 5368 5728 5735 5765 5863 6056 6057

FISSION PRODUCTS

326 634 1543 4347 6057

APPENDIX IV

APPENDIX IV

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ACTIVATION ANALYSIS-TECHNIQUE USED

REACTOR - THERMAL NEUTRON (N,Y)

2 4 5 6 7 9 10 11 12 13 14 15 21 22 24 26 28 30 31 32
33 34 35 39 40 41 42 43 44 47 48 50 51 54 55 56 57 59
61 62 63 64 65 66 67 68 69 73 74 78 79 80 81 83 84 85
86 88 89 90 93 96 97 100 101 102 103 104 107 115 116
117 120 121 122 123 124 126 133 134 136 137 138 139 140
141 142 143 144 145 146 147 148 149 151 154 158 161 162
163 164 165 166 167 171 172 174 176 178 179 180 183 186
187 193 194 197 198 200 208 209 210 211 212 214 215 216
217 221 222 223 225 226 231 232 234 235 236 237 238 239
240 242 243 244 245 246 248 249 250 254 255 261 262 263
264 265 266 267 268 269 270 279 284 286 287 288 289 290
291 300 302 304 305 310 317 319 321 322 323 325 326 328
329 330 331 332 334 347 349 351 352 353 354 356 357 358
360 361 362 363 364 366 367 370 371 375 376 378 379 386
387 390 393 395 396 397 398 400 405 407 408 409 410 411
412 414 416 418 419 421 422 424 428 429 431 432 433 434
436 437 438 439 442 444 448 449 450 451 452 454 459 460
461 462 465 467 468 469 470 471 472 473 474 475 476 477
478 481 482 483 484 485 486 487 488 489 490 492 493 494
501 502 504 505 506 507 508 509 511 512 513 514 516 517
520 521 522 523 524 525 526 531 533 535 537 538 539 541
542 543 544 545 548 550 551 552 553 560 561 562 564 565
566 570 571 572 573 574 575 581 583 584 585 586 587 588
590 592 593 595 598 600 601 602 604 605 606 607 608 609
610 614 619 620 622 625 630 634 636 637 638 640 641 648
651 652 657 659 662 663 665 667 670 673 674 675 676 677
681 683 686 687 688 689 690 692 698 699 701 702 705 706
707 708 709 710 711 713 714 716 717 718 721 723 726 727
728 729 730 735 736 738 739 740 741 742 752 753 754 755
757 758 760 763 765 767 768 772 773 774 775 776 777 778
779 781 788 789 790 792 797 798 799 802 803 804 805 806
808 810 812 813 815 817 819 820 821 822 823 824 825 826
829 830 831 832 834 838 841 842 843 844 845 846 848 849
850 851 852 853 854 856 858 864 866 867 868 869 871 877
879 880 881 882 883 887 888 896 902 903 906 907 909 910
911 914 915 916 918 919 920 922 923 927 928 929 932 933
934 935 937 938 939 940 941 942 943 944 945 946 948 950
951 952 953 954 955 956 957 959 962 963 966 968 970 971
973 974 975 976 977 979 980 982 984 985 986 987 988 989
990 991 992 993 994 995 997 998 999 1000 1001 1002 1003
1004 1005 1007 1008 1009 1010 1011 1012 1015 1016 1018
1019 1020 1021 1022 1024 1025 1027 1028 1030 1031 1032
1034 1035 1036 1038 1041 1042 1043 1045 1047 1056 1057
1059 1060 1063 1064 1066 1068 1069 1073 1074 1075 1076
1077 1078 1080 1085 1086 1087 1088 1089 1090 1092 1094
1095 1096 1097 1098 1099 1100 1102 1105 1107 1108 1109
1110 1112 1114 1117 1118 1119 1121 1122 1123 1124 1125

ACTIVATION ANALYSIS-TECHNIQUE USED

REACTOR - THERMAL NEUTRON (N, Y) (CONTINUED)

1127 1129 1131 1132 1133 1134 1135 1137 1138 1139 1140
1141 1143 1145 1146 1147 1150 1153 1155 1156 1159 1162
1165 1166 1167 1169 1170 1171 1173 1174 1176 1177 1180
1181 1182 1183 1184 1185 1187 1188 1189 1190 1191 1192
1193 1195 1196 1197 1199 1200 1201 1203 1204 1205 1206
1207 1208 1209 1210 1211 1212 1214 1215 1216 1218 1220
1221 1222 1223 1224 1225 1226 1227 1228 1230 1231 1233
1234 1235 1236 1237 1239 1240 1241 1242 1243 1244 1245
1246 1247 1250 1251 1254 1257 1260 1261 1262 1263 1264
1265 1266 1269 1271 1272 1273 1274 1275 1277 1278 1279
1281 1283 1285 1286 1287 1288 1289 1290 1291 1292 1293
1299 1300 1302 1306 1307 1310 1311 1313 1314 1317 1319
1320 1323 1324 1325 1326 1331 1332 1333 1340 1342 1347
1349 1351 1353 1356 1357 1361 1373 1376 1378 1380 1381
1382 1383 1384 1385 1386 1389 1391 1392 1395 1396 1398
1400 1401 1402 1404 1406 1409 1410 1411 1412 1416 1419
1420 1421 1425 1426 1428 1429 1431 1432 1433 1434 1436
1438 1439 1441 1443 1446 1449 1452 1454 1455 1456 1457
1458 1460 1462 1463 1466 1468 1469 1470 1471 1472 1473
1474 1477 1478 1479 1480 1484 1487 1491 1492 1493 1494
1495 1496 1497 1500 1502 1504 1505 1510 1512 1515 1517
1518 1519 1520 1521 1525 1526 1527 1529 1531 1533 1534
1537 1538 1539 1540 1541 1542 1543 1548 1549 1550 1551
1552 1553 1554 1555 1556 1558 1563 1564 1565 1566 1568
1569 1570 1571 1572 1573 1574 1576 1577 1578 1581 1583
1584 1585 1587 1588 1592 1595 1596 1597 1601 1603 1606
1607 1610 1612 1613 1614 1615 1616 1617 1618 1621 1628
1631 1632 1633 1634 1635 1636 1641 1644 1645 1647 1648
1649 1652 1653 1654 1655 1658 1659 1660 1661 1664 1665
1671 1672 1673 1676 1677 1678 1679 1681 1682 1689 1692
1693 1694 1697 1699 1702 1703 1705 1706 1707 1708 1709
1710 1711 1712 1715 1717 1719 1722 1723 1725 1726 1727
1729 1731 1732 1734 1736 1737 1741 1743 1744 1745 1746
1747 1748 1749 1750 1751 1752 1755 1759 1760 1761 1762
1763 1766 1767 1769 1770 1774 1780 1781 1782 1783 1785
1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1797
1799 1800 1803 1805 1806 1812 1813 1817 1818 1819 1820
1821 1824 1825 1827 1828 1829 1830 1832 1833 1834 1835
1839 1840 1841 1842 1844 1845 1848 1855 1856 1857 1858
1862 1863 1870 1872 1874 1878 1881 1882 1886 1888 1890
1891 1892 1893 1894 1895 1897 1901 1902 1904 1906 1907
1909 1913 1914 1918 1920 1921 1924 1925 1926 1929 1930
1931 1936 1937 1938 1945 1948 1952 1953 1957 1958 1959
1960 1962 1964 1965 1966 1969 1970 1971 1973 1974 1975
1976 1977 1980 1982 1983 1984 1985 2052 2121 2122 2123
2141 2144 2145 2146 2154 2157 2251 2283 2296 2306 2308

ACTIVATION ANALYSIS-TECHNIQUE USED

REACTOR - THERMAL NEUTRON (N, Y) (CONTINUED)

2327 2333 2337 2340 2347 2350 2358 2365 2369 2376 2386
2403 2422 2426 2430 2431 2437 2440 2441 2444 2445 2447
2455 2464 2473 2474 2480 2481 2493 2495 2496 2497 2499
2502 2503 2507 2508 2509 2511 2515 2517 2523 2525 2533
2534 2535 2537 2539 2540 2546 2548 2550 2551 2552 2553
2558 2559 2563 2565 2571 2573 2578 2579 2584 2590 2595
2597 2601 2605 2607 2610 2611 2612 2613 2614 2619 2621
2633 2636 2638 2639 2640 2641 2643 2644 2645 2651 2654
2657 2658 2659 2660 2663 2664 2665 2669 2671 2673 2680
2683 2685 2687 2688 2689 2690 2694 2695 2696 2699 2701
2707 2711 2713 2714 2715 2717 2718 2721 2722 2724 2725
2727 2728 2730 2731 2732 2733 2735 2737 2739 2740 2741
2744 2748 2750 2752 2753 2754 2756 2759 2762 2766 2769
2772 2773 2775 2776 2782 2786 2789 2790 2791 2792 2793
2794 2795 2797 2800 2801 2804 2805 2806 2819 2821 2836
2838 2839 2840 2844 2845 2846 2848 2849 2852 2853 2865
2870 2871 2873 2876 2878 2881 2882 2887 2888 2889 2892
2902 2904 2920 2921 2922 2923 2926 2927 2929 2930 2931
2932 2936 2938 2942 2943 2945 2950 2957 2958 2963 2964
2969 2970 2973 2976 2977 2978 2979 2981 2982 2984 2989
2991 2999 3005 3027 3059 3060 3061 3062 3065 3079 3081
3084 3091 3092 3093 3098 3105 3126 3328 3341 3342 3344
3345 3350 3352 3358 3360 3362 3363 3365 3366 3367 3368
3369 3370 3371 3372 3382 3383 3384 3386 3387 3388 3391
3394 3395 3396 3397 3411 3414 3418 3464 3466 3467 3469
3470 3473 3475 3476 3481 3482 3483 3485 3486 3488 3489
3494 3498 3504 3514 3530 3661 3669 3708 3709 3710 3713
3714 3716 3723 3724 3725 3726 3727 3730 3731 3732 3736
3738 3739 3740 3745 3755 3757 3759 3760 3766 3769 3770
3774 3775 3778 3780 3785 3788 3789 3791 3797 3804 3808
3810 3811 3841 3949 3954 3955 3956 3957 3958 3959 3960
3961 3964 3979 3982 3988 3989 3990 3991 3993 3994 3998
4153 4190 4191 4192 4194 4195 4196 4201 4202 4203 4207
4208 4216 4219 4224 4230 4231 4232 4240 4242 4244 4249
4250 4253 4254 4255 4258 4262 4263 4267 4268 4269 4270
4272 4274 4278 4281 4283 4284 4285 4286 4290 4291 4293
4296 4298 4299 4301 4302 4303 4305 4306 4307 4308 4309
4310 4311 4314 4315 4319 4321 4322 4325 4328 4329 4347
4374 4381 4388 4406 5262 5295 5307 5320 5323 5326 5327
5328 5335 5336 5338 5341 5343 5344 5345 5347 5349 5350
5357 5358 5359 5363 5364 5365 5366 5368 5369 5370 5378
5381 5382 5385 5386 5390 5393 5394 5395 5397 5398 5399
5401 5402 5405 5406 5407 5408 5410 5415 5422 5428 5436
5438 5439 5444 5447 5448 5449 5472 5499 5500 5502 5510
5515 5517 5547 5551 5571 5577 5579 5591 5592 5619 5697
5699 5701 5703 5704 5705 5706 5707 5712 5713 5716 5717

REACTOR - THERMAL NEUTRON (N, Y) (CONTINUED)

5718 5719 5721 5725 5726 5727 5728 5729 5730 5731 5732
5735 5742 5743 5746 5747 5749 5750 5751 5753 5755 5756
5759 5760 5761 5765 5766 5770 5771 5775 5777 5779 5784
5785 5786 5787 5788 5790 5792 5793 5808 5851 5858 5860
5862 5864 5868 5872 5873 5874 5919 5922 5924 5925 5926
5927 5928 5929 5931 5932 5933 5934 5935 5936 5939 5940
5941 5942 5944 5948 5949 5951 5953 5955 5958 5959 5960
5961 5962 5963 5964 5965 5967 5969 5970 5972 5975 5976
5977 5981 5983 5984 5991 5992 5994 5995 5996 5999 6000
6001 6002 6003 6005 6006 6007 6008 6010 6011 6012 6013
6015 6016 6017 6023 6024 6031 6039 6040 6043 6044 6047
6048 6050 6052 6054 6055 6058 6061 6062 6063 6064 6067
6068 6069 6071 6073 6074 6077 6079 6080 6081 6085 6086

REACTOR - FAST (N,P) (N,A) (N,N1) (N,2N)

140 157 314 341 491 520 530 681 703 707 711 716 807 808
810 811 818 828 843 854 877 897 951 1157 1161 1167 1198
1327 1334 1340 1357 1374 1378 1403 1413 1415 1424 1427
1439 1455 1479 1546 1547 1620 1639 1659 1717 1731 1814
1902 1907 1911 1965 2595 2623 2676 3059 3064 3361 3489
3494 3560 3965 3986 3997 4221 4227 5698 5759

REACTOR - EPITHERMAL

140 520 807 818 828 862 1186 1439 1506 1659 1731 1910
2625 3385 3494 3975 3987 3998 4300 5848

ISOTOPE SOURCE - NEUTRONS

1 20 37 52 53 82 130 135 147 188 203 213 219 227 228
229 230 233 234 258 259 272 301 321 327 333 335 343 344
377 402 445 555 589 612 665 717 783 791 810 827 837 841
904 905 924 949 958 1055 1056 1061 1093 1111 1202 1259
1267 1295 1298 1315 1329 1336 1337 1357 1393 1423 1430
1440 1513 1544 1558 1559 1586 1591 1630 1637 1642 1651
1698 1740 1754 1758 1772 1822 1843 1857 1865 1873 1879
1880 1941 1961 2364 2698 2940 2956 2966 2987 3033 3078
3366 3373 3374 3375 3376 3399 3411 3465 3489 3758 3948
3962 3996 4198 4215 4276 4289 4294 5325 5356 5501 5566
5581 5716 5772 5854 5857

ACTIVATION ANALYSIS-TECHNIQUE USED

GENERATOR - OR SEALED TUBE

74 77 131 155 199 204 253 271 285 316 324 376 426 500
518 519 546 567 591 611 618 621 628 629 637 638 658 678
679 680 695 696 712 716 762 810 841 898 917 921 936 960
961 972 977 996 1017 1033 1046 1052 1054 1056 1067 1075
1084 1103 1104 1115 1116 1152 1172 1217 1229 1248 1258
1284 1294 1297 1304 1309 1353 1394 1397 1399 1407 1414
1437 1439 1444 1450 1453 1489 1508 1514 1522 1530 1535
1589 1593 1602 1619 1626 1640 1656 1666 1667 1670 1685
1698 1701 1721 1738 1739 1753 1773 1798 1802 1804 1813
1815 1859 1864 1875 1887 1889 1896 1899 1900 1905 1912
1922 1939 1940 1950 1954 1955 1956 1957 1968 1978 1981
2129 2297 2354 2384 2410 2418 2433 2434 2453 2498 2504
2505 2506 2512 2518 2519 2524 2526 2527 2542 2549 2561
2567 2568 2569 2580 2586 2591 2596 2598 2608 2615 2617
2620 2622 2649 2666 2667 2674 2678 2705 2707 2720 2734
2749 2761 2764 2778 2796 2798 2802 2806 2849 2933 2975
2983 2987 3058 3059 3063 3073 3074 3075 3076 3085 3087
3088 3090 3335 3355 3357 3364 3366 3411 3460 3487 3495
3496 3497 3502 3553 3717 3718 3746 3751 3753 3781 3790
3794 3796 3810 3973 3976 3980 3981 4005 4205 4214 4228
4252 4260 4261 4273 4282 4392 5261 5321 5322 5332 5339
5353 5380 5383 5384 5389 5403 5409 5416 5420 5431 5432
5443 5445 5450 5451 5452 5708 5711 5714 5720 5739 5757
5764 5772 5776 5778 5780 5781 5782 5784 5884 5920 5923
5978 6014 6022 6059 6065 6075

ACCELERATOR - NEUTRONS

16 17 23 91 92 98 108 109 111 113 125 175 189 205 274
275 304 316 376 403 413 520 549 574 580 596 635 639 647
660 732 733 780 841 863 872 875 876 934 965 967 1014
1026 1072 1075 1213 1319 1355 1407 1442 1444 1489 1509
1598 1623 1691 1808 1836 1838 1854 1917 1940 1963 2323
2510 2661 2668 2684 2686 2697 2774 2947 3461 3495 3496
3497 3752 3768 3791 3979 4198 4202

PHOTON ACTIVATION (INCLUDES ISOTOPE SOURCE)

38 45 46 49 58 74 75 169 170 206 207 339 351 380 554
631 637 669 703 814 855 861 978 983 1006 1014 1043 1062
1075 1081 1083 1106 1136 1160 1163 1175 1178 1238 1263
1270 1334 1340 1375 1435 1444 1475 1481 1501 1560 1597
1609 1646 1764 1765 1778 1816 1849 1857 1861 1871 1926
1935 2126 2272 2298 2303 2318 2348 2495 2554 2555 2697
2758 2777 2965 2972 3072 3077 3346 3379 3474 3486 3495

PHOTON ACTIVATION (INCLUDES ISOTOPE SOURCE) (CONTINUED)

3727 3729 3771 3775 3799 3803 3810 3970 3979 4189 4211
4277 4386 5308 5311 5319 5379 5430 5442 5520 5621 5740
5784 5870 5950 5954 5977 5979 6070

CHARGE PARTICLE (INCLUDES ISOTOPE SOURCE)

4 8 29 87 105 118 119 153 160 181 184 185 201 274 275
314 346 381 382 383 384 385 401 417 423 443 455 479 495
497 498 499 520 578 623 637 638 703 734 744 771 839 855
912 913 1013 1023 1065 1075 1091 1101 1148 1151 1194
1219 1232 1256 1280 1312 1318 1377 1408 1444 1450 1483
1486 1490 1561 1599 1604 1668 1704 1720 1742 1778 1811
1823 1831 1836 1837 1915 1935 1951 2254 2259 2298 2381
2429 2505 2531 2555 2618 2628 2629 2632 2634 2652 2673
2697 2712 2948 2949 3070 3071 3089 3351 3403 3411 3495
3711 3721 3722 3767 3777 3783 3791 3976 3977 3979 3995
4000 4193 4197 4198 4209 4211 4226 5177 5238 5330 5372
5429 5435 5442 5543 5580 5752 5768 5769 5773 5921 5938
5957 6004 6053 6056 6066 6072

SECONDARY PARTICLE

110 196 256 391 654 655 756 770 782 784 867 868 981
1070 1071 1075 1082 1158 1252 1330 1450 1528 1532 1609
1675 1713 1730 1801 1979 2385 2543 2562 2661 2726 3965
3985 3992

NON-DESTRUCTIVE

2 13 17 21 23 24 29 35 37 38 43 45 46 48 49 51 52 53 54
58 59 73 75 81 82 88 90 97 98 100 102 104 105 107 108
109 110 113 114 118 119 120 125 130 131 135 136 140 144
147 148 151 153 155 163 169 170 171 175 179 184 185 188
189 198 199 204 205 206 207 213 215 216 219 227 228 229
232 233 237 238 239 240 246 252 253 259 266 267 268 271
272 274 275 291 300 301 304 305 319 323 325 330 331 333
339 343 344 346 349 351 357 358 371 375 380 381 382 386
387 393 396 397 402 403 405 407 408 413 414 417 423 426
428 433 444 445 454 455 460 461 462 468 472 476 479 486
487 488 489 491 494 499 500 512 514 516 518 519 520 521
523 524 530 533 538 546 549 552 554 555 561 562 566 567
573 574 578 580 581 584 589 590 591 592 594 596 598 604
605 606 607 608 612 618 619 620 621 623 625 628 629 630
631 632 635 640 641 654 657 658 659 662 665 667 669 670
686 687 690 695 696 702 703 707 709 711 712 713 716 717

NON-DESTRUCTIVE (CONTINUED)

725 726 732 733 738 739 744 752 753 754 755 756 758 762
763 770 771 774 775 782 783 784 791 797 798 803 806 807
808 810 811 814 818 819 822 823 831 839 842 843 844 845
850 851 852 853 854 855 861 862 863 868 882 887 888 902
904 905 908 912 913 914 915 916 921 924 927 932 933 934
936 938 939 940 943 946 948 949 950 951 954 955 956 957
958 959 960 961 966 972 974 975 977 978 981 982 983 986
987 989 990 991 992 993 994 996 1003 1004 1005 1006
1007 1008 1009 1011 1013 1014 1017 1019 1021 1023 1024
1025 1026 1029 1030 1031 1032 1033 1035 1036 1052 1054
1055 1056 1059 1060 1061 1062 1063 1064 1065 1066 1067
1068 1070 1071 1072 1073 1074 1075 1077 1078 1079 1081
1082 1083 1084 1088 1090 1092 1093 1095 1097 1098 1099
1103 1104 1106 1110 1111 1112 1114 1115 1116 1131 1132
1136 1140 1141 1143 1152 1153 1158 1160 1161 1162 1172
1175 1178 1195 1196 1197 1199 1200 1202 1203 1204 1213
1216 1217 1218 1219 1220 1225 1227 1228 1229 1233 1238
1239 1245 1248 1251 1252 1254 1256 1258 1259 1260 1263
1267 1269 1270 1279 1280 1283 1284 1289 1290 1294 1295
1297 1298 1302 1304 1306 1309 1311 1314 1315 1318 1336
1337 1351 1355 1357 1361 1374 1375 1376 1377 1380 1386
1389 1392 1393 1394 1395 1396 1397 1398 1399 1402 1403
1407 1413 1414 1415 1419 1420 1424 1427 1429 1435 1452
1453 1455 1456 1460 1466 1468 1472 1473 1477 1481 1483
1487 1491 1492 1495 1496 1500 1501 1504 1505 1506 1509
1510 1513 1514 1517 1519 1521 1522 1527 1530 1531 1532
1535 1541 1546 1547 1549 1550 1551 1552 1553 1555 1556
1558 1559 1565 1567 1572 1573 1574 1576 1578 1583 1585
1586 1589 1590 1591 1595 1597 1598 1599 1601 1604 1606
1611 1617 1618 1620 1623 1635 1637 1639 1642 1646 1649
1651 1654 1656 1664 1665 1666 1667 1670 1676 1677 1680
1683 1685 1686 1689 1691 1702 1706 1707 1709 1710 1712
1715 1717 1719 1721 1725 1726 1736 1737 1738 1739 1740
1746 1751 1752 1754 1758 1759 1760 1761 1764 1765 1772
1773 1778 1782 1783 1785 1787 1789 1790 1793 1794 1795
1798 1799 1802 1803 1804 1806 1809 1813 1814 1815 1816
1819 1821 1822 1823 1827 1829 1830 1831 1834 1837 1840
1843 1854 1855 1857 1859 1861 1865 1871 1873 1875 1878
1879 1881 1882 1886 1887 1888 1889 1896 1897 1898 1899
1900 1905 1906 1910 1912 1917 1921 1922 1924 1926 1929
1938 1939 1940 1941 1948 1950 1951 1953 1954 1955 1956
1957 1958 1961 1962 1965 1966 1968 1971 1978 1981 1983
1984 1985 2121 2123 2126 2129 2141 2144 2145 2146 2251
2254 2272 2297 2303 2318 2323 2337 2350 2354 2364 2376
2381 2384 2418 2422 2426 2429 2430 2433 2441 2453 2480
2481 2493 2495 2496 2497 2498 2502 2503 2504 2505 2506
2507 2508 2517 2518 2519 2524 2525 2526 2542 2548 2549

ACTIVATION ANALYSIS-TECHNIQUE USED

NON-DESTRUCTIVE (CONTINUED)

2553 2554 2559 2569 2571 2579 2580 2584 2586 2591 2596
2597 2598 2605 2607 2608 2610 2612 2614 2615 2618 2619
2621 2622 2623 2633 2634 2644 2645 2649 2651 2652 2660
2661 2663 2664 2666 2668 2671 2676 2678 2680 2684 2686
2688 2689 2694 2699 2705 2707 2711 2727 2730 2732 2734
2737 2739 2740 2744 2748 2749 2750 2751 2756 2758 2759
2762 2764 2766 2774 2775 2777 2782 2789 2790 2796 2797
2798 2801 2802 2804 2805 2844 2892 2920 2921 2922 2927
2931 2933 2940 2942 2943 2945 2948 2949 2956 2957 2963
2964 2965 2966 2972 2976 2979 2981 2983 2987 3027 3033
3060 3062 3063 3078 3085 3087 3088 3089 3090 3126 3344
3346 3350 3355 3357 3358 3361 3362 3363 3364 3365 3366
3367 3368 3369 3370 3371 3372 3373 3374 3375 3376 3379
3384 3385 3386 3394 3399 3411 3418 3460 3461 3464 3466
3470 3473 3474 3486 3502 3514 3530 3553 3661 3708 3709
3710 3711 3717 3718 3721 3722 3727 3729 3730 3736 3738
3739 3740 3745 3746 3752 3753 3760 3766 3767 3768 3770
3771 3775 3778 3780 3781 3783 3788 3790 3791 3794 3797
3799 3803 3809 3810 3811 3841 3948 3954 3956 3965 3970
3973 3975 3976 3977 3980 3981 3986 3991 3992 3994 3996
3997 3998 4000 4005 4189 4191 4193 4194 4196 4197 4205
4207 4208 4209 4211 4214 4215 4216 4224 4226 4230 4231
4232 4240 4250 4252 4258 4260 4261 4262 4263 4270 4276
4277 4281 4282 4283 4284 4285 4286 4289 4293 4294 4308
4322 4328 4329 4347 4381 4386 4392 4406 5177 5238 5261
5262 5308 5311 5319 5320 5321 5322 5323 5325 5326 5330
5332 5343 5350 5353 5356 5357 5358 5363 5370 5372 5380
5383 5384 5385 5386 5389 5390 5393 5394 5399 5401 5402
5403 5407 5408 5409 5420 5428 5429 5430 5431 5432 5435
5438 5445 5450 5451 5452 5501 5510 5515 5517 5543 5547
5551 5566 5571 5577 5579 5581 5591 5621 5698 5704 5706
5707 5708 5713 5714 5720 5726 5727 5732 5735 5739 5740
5742 5746 5749 5752 5756 5759 5761 5764 5765 5766 5768
5769 5772 5773 5776 5778 5779 5781 5782 5786 5788 5848
5858 5870 5872 5874 5884 5919 5920 5923 5925 5927 5931
5932 5933 5934 5936 5939 5950 5953 5958 5959 5965 5967
5969 5970 5975 5977 5978 5979 5992 5994 6000 6004 6005
6011 6012 6014 6015 6031 6047 6048 6050 6052 6056 6058
6062 6063 6065 6068 6069 6072 6073 6074

CHEMISTRY - DISSOLUTION TECHNIQUE

103 192 212 239 254 255 270 322 436 442 465 469 470 473
482 512 522 550 610 651 677 698 706 718 815 821 881 909
910 1001 1155 1166 1167 1169 1171 1173 1174 1176 1192
1206 1207 1214 1436 1788 1842 1930 2154 2296 2365 2657
2836 2991 3334 5399 5444

ACTIVATION ANALYSIS-TECHNIQUE USED

CHEMISTRY - GROUP SEPARATIONS

103 166 167 252 255 424 462 508 509 614 674 704 708 714
726 741 805 820 821 829 830 834 848 850 878 968 985
1045 1047 1069 1089 1118 1123 1134 1138 1254 1323 1425
1434 1443 1699 1710 1797 1800 1832 1894 1945 1965 1975
2403 2523 2715 2718 2729 2840 2852 2922 2936 2950 3382
4004 5344 5345 5347 5619 5760 5771 5785 5981 6071

CHEMISTRY - GENERAL

4 5 9 22 28 65 68 69 78 80 81 83 84 85 89 123 141 154
158 174 176 187 192 193 194 200 215 239 240 282 284 287
288 289 290 291 300 310 317 374 477 493 502 564 588 614
638 640 641 651 652 662 674 676 683 686 688 692 698 699
702 703 704 705 706 710 735 742 760 767 773 779 789 790
807 815 818 825 827 838 844 851 852 856 879 882 895 896
920 942 944 962 963 964 965 967 970 971 976 979 980 984
995 997 998 1000 1002 1004 1020 1022 1027 1034 1041
1057 1060 1075 1076 1085 1086 1087 1088 1094 1097 1102
1105 1107 1122 1145 1156 1165 1169 1170 1180 1183 1184
1187 1189 1190 1193 1194 1275 1283 1286 1312 1351 1354
1356 1357 1361 1371 1373 1382 1383 1384 1385 1396 1397
1400 1406 1408 1411 1421 1442 1457 1494 1652 1665 1675
1693 1694 1707 1709 1711 1713 1717 1723 1725 1760 1769
1786 1791 1803 1818 1828 1832 1848 1856 1858 1863 1890
1902 1907 1911 1914 1920 1933 1976 2296 2333 2447 2464
2473 2474 2495 2509 2522 2534 2535 2543 2546 2550 2578
2590 2601 2685 2687 2717 2721 2735 2802 2819 2848 2876
2892 2921 2922 2923 3079 3091 3382 3481 3483 3486 3504
3508 3514 3560 3708 3755 3962 3987 3988 3995 4153 4216
4219 4300 4315 4317 4319 5307 5327 5416 5436 5444 5499
5502 5716 5717 5718 5861 5864 5924 5940 5948 5976 5980
5982 5991 6008 6016 6044 6055

CHEMISTRY - PRECIPITATION

6 7 10 11 12 30 31 32 39 44 54 55 56 63 64 66 67 96 103
115 116 124 130 133 137 138 139 145 146 148 161 165 172
178 180 183 209 214 217 221 223 225 227 230 231 232 234
236 243 244 246 249 250 252 254 255 262 263 270 279 300
302 304 326 329 349 351 353 360 361 362 363 364 366 367
391 398 400 411 416 422 429 431 432 434 436 448 449 452
459 461 465 467 478 482 483 501 512 517 522 525 531 535
537 541 544 545 553 560 562 571 575 585 586 587 620 622
655 673 675 677 687 689 727 757 776 777 778 788 792 802
805 815 821 858 867 869 871 878 892 907 922 928 929 937
945 1060 1108 1117 1118 1124 1125 1127 1135 1137 1151

ACTIVATION ANALYSIS-TECHNIQUE USED

CHEMISTRY - PRECIPITATION (CONTINUED)

1155 1159 1166 1169 1170 1171 1173 1174 1176 1177 1181
1182 1188 1205 1206 1207 1208 1212 1214 1215 1222 1223
1224 1226 1230 1231 1232 1235 1237 1240 1241 1243 1244
1246 1247 1257 1266 1271 1278 1292 1293 1299 1300 1307
1310 1319 1320 1323 1324 1326 1334 1340 1347 1351 1428
1433 1449 1456 1458 1469 1471 1473 1477 1478 1480 1484
1515 1520 1525 1533 1542 1548 1563 1564 1568 1569 1571
1577 1581 1584 1592 1613 1614 1615 1621 1631 1632 1634
1636 1648 1655 1660 1671 1672 1677 1682 1697 1705 1720
1734 1743 1745 1749 1750 1770 1781 1801 1812 1825 1833
1839 1844 1893 1936 1937 1970 1977 1979 1982 2122 2365
2385 2496 2497 2552 2573 2643 2654 2658 2669 2690 2751
2769 2772 2773 2786 2791 2792 2793 2821 2838 2839 2849
2852 2865 2878 2926 2930 2938 2954 2977 2982 2984 3061
3098 3105 3328 3352 3387 3391 3393 3395 3467 3485 3488
3713 3723 3724 3725 3726 3732 3785 3949 3957 3960 3985
3993 3994 4195 4219 4221 4227 4244 4249 4253 4255 4267
4268 4272 4290 4299 4307 5349 5359 5369 5406 5472 5522
5721 5731 5755 5777 5972 5983 6002 6010 6053 6064 6086

CHEMISTRY - DISTILLATION

8 10 11 62 103 117 121 122 124 134 142 143 172 181 186
196 197 221 222 226 231 242 245 248 256 279 284 322 370
378 451 465 474 475 481 493 498 562 570 602 636 709 804
812 851 864 871 911 1010 1012 1100 1119 1124 1135 1151
1157 1205 1221 1226 1230 1231 1235 1246 1250 1278 1288
1326 1340 1412 1416 1425 1446 1470 1528 1542 1548 1560
1564 1648 1679 1730 1742 1744 1749 1862 1891 1904 1964
1969 2157 2403 2515 2537 2540 2562 2563 2661 2701 2712
2731 2795 2813 2853 2954 3360 3713 3725 3726 3732 3789
3808 3965 4217 4254 4255 4268 4269 4274 4278 4305 4321
5295 5358 5364 5366 5449 5851 5926 5938 5954 6025 6039

CHEMISTRY - SOLVENT EXTRACTION

12 26 33 34 40 41 42 50 62 66 116 117 124 133 137 138
140 145 146 165 178 183 186 210 212 221 229 234 235 239
243 249 252 254 255 262 269 328 361 362 367 379 409 410
412 422 424 443 482 485 490 492 507 563 565 575 586 591
601 634 772 781 804 810 813 815 858 864 866 867 878 880
883 906 928 952 1015 1028 1096 1109 1121 1125 1127 1133
1135 1139 1143 1145 1146 1147 1150 1153 1156 1159 1166
1167 1168 1173 1184 1191 1201 1211 1212 1215 1231 1234
1235 1243 1244 1250 1262 1264 1266 1273 1274 1278 1292
1307 1313 1317 1323 1324 1325 1326 1340 1391 1401 1426
1431 1433 1442 1456 1458 1470 1477 1480 1497 1518 1526

ACTIVATION ANALYSIS-TECHNIQUE USED

CHEMISTRY - SOLVENT EXTRACTION (CONTINUED)

1537 1538 1548 1564 1566 1569 1581 1592 1603 1610 1614
1615 1621 1632 1648 1653 1671 1692 1703 1728 1741 1743
1748 1749 1763 1767 1788 1820 1825 1833 1841 1874 1895
1901 1913 1930 1931 1960 1980 2036 2154 2340 2347 2369
2386 2431 2434 2444 2445 2455 2499 2502 2525 2539 2611
2613 2641 2665 2666 2690 2696 2722 2752 2753 2754 2769
2791 2792 2793 2795 2811 2873 2881 2888 2889 2951 2991
3005 3084 3342 3345 3391 3395 3476 3482 3713 3714 3804
3957 3982 4190 4203 4253 4255 4269 4302 4311 4314 5335
5349 5365 5369 5397 5415 5500 5699 5703 5719 5728 5729
5730 5743 5747 5770 5775 5787 5793 5848 5928 5935 5949
5955 5960 5995 5996 5999 6013 6017 6054 6061

CHEMISTRY - CHROMATOGRAPHY OR ION EXCHANGE

14 47 50 54 61 79 87 93 96 115 138 140 145 146 160 212
225 252 258 263 267 325 331 356 390 416 418 421 422 434
439 442 450 504 520 542 548 550 595 606 689 717 723 726
728 730 799 870 871 874 878 892 899 900 909 919 923 988
999 1015 1016 1038 1047 1063 1101 1107 1168 1169 1176
1205 1209 1210 1214 1221 1222 1236 1242 1243 1265 1272
1277 1281 1285 1287 1292 1307 1323 1324 1332 1333 1342
1381 1404 1410 1421 1428 1431 1432 1434 1441 1449 1454
1462 1463 1469 1470 1471 1474 1477 1478 1479 1486 1512
1529 1564 1566 1584 1592 1596 1603 1607 1613 1616 1632
1633 1634 1644 1645 1668 1677 1678 1679 1681 1682 1704
1708 1722 1732 1741 1747 1759 1762 1766 1780 1797 1800
1805 1811 1817 1824 1835 1839 1844 1870 1872 1892 1894
1925 1945 1952 1957 1959 1973 1983 2052 2148 2149 2283
2308 2327 2386 2480 2496 2513 2523 2557 2638 2639 2640
2654 2669 2687 2690 2695 2713 2714 2725 2741 2754 2776
2794 2800 2812 2846 2849 2852 2870 2882 2888 2901 2902
2904 2932 2969 2973 2989 2999 3005 3065 3093 3341 3383
3397 3414 3469 3475 3661 3714 3716 3731 3757 3759 3774
3789 3808 3810 3955 3957 3958 3959 3961 3964 3990 4004
4192 4219 4267 4268 4291 4296 4301 4388 4391 4410 4411
5336 5338 5341 5359 5368 5378 5382 5405 5410 5422 5439
5447 5448 5697 5750 5751 5790 5792 5808 5862 5873 5941
5951 5955 5961 5962 5963 5964 5981 6001 6007 6040 6043
6067 6077 6078 6079 6084 6085

CHEMISTRY - ELECTRODEPOSITION

138 211 261 340 395 579 832 1113 1129 1192 1221 1313
1391 1471 1525 2511 2728 2929 3991 4201 4303 5395 5398
6076

ACTIVATION ANALYSIS-TECHNIQUE USED

CHEMISTRY - ISOTOPE EXCHANGE

126 436 539 540 636 1525 2277 2551 5701 5712 5860 6080

CHEMISTRY - AMALGAM EXCHANGE

740 815 1411 2006 2978 3989 4309 5942

CHEMISTRY - SZILARD-CHALMERS

153 328 1333 2473 2871

CHEMISTRY - SUBSTOICHIOMETRIC

425 768 1121 1159 1291 1346 1493 1575 1579 1587 1588
1974 2154 2358 2560 2845 3396 3804 4306 4310 5922 5956
5984 6024

CHEMISTRY - AUTOMATED

285 708 1042 2403 2556 2558 2901 5760

CHEMISTRY - ABSORPTION OR ADSORPTION

192 1539 1543

RAPID RADIOCHEMICAL SEPARATION

254 442 583 686 697 811 821 829 830 834 953 982 1172
1409 1412 1425 1434 1446 1692 2157 2409 2611 2636 2954
3388 3487 3669 3989 5336

ISOTOPE DILUTION

172 195 1018 1750 2887 3084 3093 4298 5753

GAMMA SPECTROMETRY

2 4 5 9 12 13 14 15 17 21 26 28 29 33 34 35 39 40 41 42
43 44 48 50 54 55 56 58 59 61 64 78 79 80 81 89 90 103
104 107 113 116 117 130 131 136 137 140 145 146 148 153
160 165 167 172 173 175 178 179 183 184 185 193 197 199
205 212 215 221 237 238 239 252 253 254 255 258 259 267
268 272 279 284 285 288 289 290 291 301 302 304 305 310
312 314 317 318 319 321 323 325 326 328 329 330 331 339
343 344 349 351 352 353 356 357 364 370 371 374 375 377

ACTIVATION ANALYSIS-TECHNIQUE USED

GAMMA SPECTROMETRY (CONTINUED)

386 387 390 391 395 398 403 405 407 409 410 412 414 416
418 422 423 425 426 430 433 434 439 442 444 445 448 450
454 455 459 460 461 472 473 476 482 486 487 488 489 493
494 500 504 507 508 509 516 518 519 521 531 533 535 542
546 548 552 555 560 561 562 564 566 567 570 573 574 581
583 584 585 586 587 588 590 592 596 601 604 605 606 607
608 614 619 620 622 623 625 628 630 634 635 636 637 638
640 641 649 652 653 655 657 658 659 662 665 667 676 686
687 688 689 690 693 695 696 698 701 702 703 705 706 707
708 709 710 711 712 713 714 716 718 726 727 732 733 735
738 740 741 752 753 754 756 758 760 762 763 767 768 771
772 773 777 781 784 788 789 790 791 792 796 797 798 802
803 804 805 806 810 811 812 813 814 818 820 821 822 823
824 825 827 829 830 831 833 834 844 845 848 849 850 851
852 855 856 861 863 866 867 871 879 880 881 882 883 884
886 887 888 892 899 902 903 906 907 912 913 915 919 920
923 924 927 930 931 932 933 934 935 936 938 940 942 943
944 945 946 948 950 951 953 955 956 957 959 960 961 962
964 966 968 971 972 974 977 980 982 984 986 987 988 989
990 992 994 995 996 997 998 999 1001 1002 1003 1004
1005 1006 1007 1008 1009 1010 1011 1012 1014 1017 1019
1020 1021 1022 1024 1027 1029 1031 1032 1033 1034 1035
1036 1038 1041 1042 1043 1047 1052 1055 1056 1060 1063
1064 1065 1066 1068 1072 1073 1074 1075 1076 1077 1084
1086 1087 1089 1090 1092 1094 1095 1097 1098 1099 1100
1101 1102 1103 1105 1106 1107 1108 1109 1110 1112 1114
1116 1117 1118 1119 1124 1129 1132 1134 1137 1138 1139
1140 1141 1143 1150 1151 1152 1153 1157 1158 1159 1161
1162 1166 1167 1168 1169 1170 1171 1172 1173 1174 1176
1182 1183 1184 1185 1187 1189 1190 1191 1192 1194 1195
1196 1199 1200 1201 1202 1203 1204 1205 1206 1207 1208
1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1220
1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231
1232 1233 1234 1235 1236 1238 1239 1240 1241 1243 1244
1245 1246 1247 1248 1250 1251 1254 1256 1257 1258 1263
1264 1265 1269 1272 1273 1275 1277 1279 1281 1283 1284
1286 1288 1289 1290 1291 1293 1294 1295 1297 1299 1300
1304 1306 1309 1310 1311 1312 1313 1314 1317 1318 1319
1320 1323 1325 1327 1332 1333 1334 1340 1347 1355 1356
1358 1359 1361 1369 1374 1375 1376 1381 1382 1383 1384
1386 1391 1395 1396 1397 1398 1400 1402 1403 1404 1406
1407 1408 1409 1410 1411 1412 1413 1414 1415 1417 1419
1420 1421 1424 1425 1426 1427 1428 1429 1432 1433 1434
1436 1437 1438 1442 1443 1446 1447 1452 1453 1454 1455
1456 1460 1462 1466 1468 1469 1470 1471 1472 1473 1477
1478 1479 1480 1481 1484 1486 1487 1491 1492 1493 1494
1496 1497 1501 1504 1505 1508 1509 1510 1512 1514 1515

ACTIVATION ANALYSIS-TECHNIQUE USED

GAMMA SPECTROMETRY (CONTINUED)

1517 1518 1519 1521 1522 1525 1526 1527 1528 1529 1530
1531 1532 1533 1535 1537 1538 1539 1540 1541 1542 1543
1548 1549 1550 1551 1552 1554 1555 1556 1558 1559 1560
1563 1564 1565 1566 1567 1568 1569 1571 1572 1574 1578
1581 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592
1595 1596 1597 1598 1599 1601 1603 1606 1607 1610 1613
1614 1615 1617 1620 1628 1631 1633 1634 1635 1639 1642
1643 1644 1645 1646 1648 1649 1652 1653 1654 1655 1656
1665 1670 1672 1673 1676 1677 1678 1679 1680 1682 1689
1691 1692 1697 1699 1702 1705 1706 1707 1708 1709 1710
1712 1715 1717 1719 1721 1722 1723 1725 1732 1734 1735
1736 1737 1738 1739 1740 1741 1742 1744 1745 1746 1748
1749 1750 1759 1760 1761 1765 1766 1767 1769 1781 1786
1789 1790 1791 1793 1794 1795 1797 1798 1799 1803 1804
1805 1806 1809 1813 1815 1817 1821 1825 1827 1828 1829
1831 1832 1833 1835 1837 1840 1842 1844 1848 1851 1854
1855 1856 1860 1863 1875 1878 1881 1882 1884 1885 1887
1889 1890 1891 1892 1893 1894 1896 1897 1899 1900 1901
1902 1904 1905 1906 1907 1910 1911 1912 1917 1920 1921
1925 1926 1929 1930 1931 1934 1936 1938 1939 1942 1943
1944 1950 1953 1954 1956 1957 1960 1961 1962 1964 1966
1968 1969 1970 1971 1973 1975 1978 1981 1982 1983 2121
2122 2123 2126 2129 2141 2144 2145 2154 2157 2251 2272
2283 2296 2297 2327 2337 2347 2354 2358 2369 2376 2381
2384 2385 2386 2403 2418 2422 2426 2430 2431 2433 2440
2441 2445 2447 2453 2455 2464 2474 2480 2481 2493 2494
2495 2496 2497 2498 2499 2502 2503 2504 2505 2506 2507
2508 2509 2511 2515 2517 2519 2524 2525 2526 2535 2537
2539 2540 2542 2548 2549 2550 2551 2552 2553 2558 2562
2563 2565 2569 2571 2573 2578 2580 2584 2586 2590 2591
2596 2598 2601 2605 2607 2608 2611 2613 2614 2615 2618
2619 2621 2622 2623 2626 2638 2639 2641 2645 2649 2651
2652 2658 2660 2661 2663 2664 2665 2666 2668 2669 2671
2676 2678 2683 2684 2685 2686 2688 2689 2690 2694 2695
2696 2699 2701 2705 2707 2711 2713 2715 2717 2718 2721
2722 2725 2727 2728 2730 2732 2733 2734 2735 2737 2739
2740 2741 2744 2749 2750 2752 2753 2754 2756 2758 2760
2764 2766 2769 2773 2774 2775 2776 2782 2786 2789 2790
2791 2792 2793 2795 2797 2798 2800 2801 2802 2804 2805
2819 2821 2836 2838 2840 2844 2846 2848 2852 2870 2871
2876 2881 2882 2888 2889 2892 2902 2904 2920 2921 2922
2923 2926 2929 2930 2931 2933 2936 2938 2948 2950 2957
2964 2965 2972 2973 2977 2978 2981 2983 2984 2989 2991
2999 3005 3027 3060 3061 3062 3063 3064 3065 3070 3073
3075 3076 3077 3079 3081 3085 3087 3088 3090 3091 3093
3098 3283 3328 3341 3342 3344 3345 3346 3350 3352 3355
3357 3358 3360 3363 3364 3365 3366 3367 3368 3369 3370

GAMMA SPECTROMETRY (CONTINUED)

3371 3372 3373 3374 3375 3382 3383 3384 3385 3386 3387
3388 3395 3396 3411 3414 3418 3461 3467 3468 3470 3474
3475 3476 3483 3485 3486 3487 3488 3490 3491 3492 3502
3504 3514 3530 3553 3560 3661 3708 3710 3713 3716 3718
3723 3724 3725 3730 3731 3736 3738 3739 3740 3741 3745
3752 3753 3757 3759 3766 3768 3769 3770 3771 3774 3775
3780 3781 3783 3785 3788 3789 3790 3791 3794 3797 3799
3803 3804 3808 3809 3810 3841 3948 3949 3954 3955 3956
3957 3958 3959 3960 3961 3964 3973 3975 3976 3980 3982
3986 3988 3989 3990 3991 3992 3994 3996 3997 3998 4153
4189 4190 4191 4192 4193 4194 4195 4196 4197 4201 4203
4205 4208 4209 4214 4215 4216 4217 4221 4224 4226 4227
4230 4231 4232 4240 4244 4249 4250 4252 4253 4254 4255
4258 4260 4261 4263 4267 4269 4270 4272 4273 4274 4276
4281 4282 4283 4284 4285 4286 4290 4291 4293 4294 4298
4299 4300 4301 4302 4303 4305 4306 4307 4308 4309 4311
4314 4315 4321 4322 4328 4329 4347 4381 4392 4406 5307
5308 5311 5321 5322 5325 5326 5327 5332 5335 5336 5338
5341 5343 5344 5345 5347 5349 5358 5359 5363 5364 5365
5366 5368 5369 5370 5378 5379 5380 5382 5383 5384 5386
5389 5390 5393 5394 5398 5401 5402 5407 5409 5410 5415
5416 5420 5428 5430 5431 5432 5435 5438 5444 5445 5447
5448 5449 5450 5451 5452 5498 5499 5500 5502 5510 5571
5579 5619 5697 5698 5699 5703 5704 5705 5706 5707 5708
5712 5713 5714 5717 5718 5720 5721 5725 5726 5727 5728
5729 5730 5732 5739 5740 5742 5743 5746 5747 5749 5750
5751 5753 5755 5759 5760 5761 5764 5768 5770 5771 5775
5776 5777 5778 5781 5785 5786 5787 5790 5792 5793 5808
5853 5858 5860 5868 5870 5872 5873 5874 5884 5920 5921
5922 5923 5924 5925 5926 5934 5935 5939 5940 5941 5942
5948 5949 5950 5951 5954 5955 5958 5959 5960 5961 5962
5963 5964 5967 5969 5970 5972 5975 5976 5978 5979 5981
5983 5991 5992 5994 5995 5996 5999 6001 6002 6005 6006
6007 6008 6010 6011 6013 6014 6015 6016 6023 6029 6039
6040 6043 6048 6050 6052 6054 6055 6056 6058 6061 6062
6063 6064 6065 6067 6068 6071 6074 6077 6080 6081 6085

SOLID STATE GAMMA SPECTROMETRY

845 865 1573 2146 2254 2350 2532 2559 2579 2604 2762
2945 3491 3791 3985 4005 4204 4280 5421 5583 5587 5766
5788 5875 5936 5975 5977 5981 6000 6012 6029 6069 6074

ACTIVATION ANALYSIS-TECHNIQUE USED

BETA AND ALPHA SPECTROMETRY

140 146 252 255 259 261 262 267 269 270 271 272 279 322
326 347 349 411 416 421 424 431 449 451 455 468 470 530
692 811 828 838 1076 1101 1123 1124 1125 1127 1145 1155
1158 1159 1160 1162 1169 1180 1183 1187 1190 1191 1197
1231 1237 1242 1263 1357 1401 1404 1416 1424 1431 1437
1455 1486 1494 1618 1885 2052 2157 2497 2518 2523 3091
3093 3464 3760 3993 4001 4227 4248 4262 4289 5343 5344
5345 5347 5444 5543

COINCIDENCE SPECTROMETRY

45 46 49 105 110 125 140 155 166 208 312 393 428 432
594 621 653 682 822 842 845 849 850 862 1012 1059 1071
1076 1079 1098 1099 1115 1194 1326 1340 1466 1500 1532
1578 1612 1616 1623 1735 1801 1814 1859 1860 1886 1914
1958 1965 1967 2500 2516 2529 2544 2546 2610 2612 2644
2772 2796 2971 2979 2987 3467 3473 3491 3720 3721 3738
3778 3970 3978 4001 4204 4386 5330 5343 5385 5399 5417
5591 5621 5782 5931 5975 6029 6053 6072

NON=DISCRIMINATORY COUNTING (A, B, Y) BUT INCLUDES HALF LIFE AND ABSORBER MEASUREMENTS, AUTORADIOGRAPHY, EMULSIONS

6 7 8 10 11 12 13 22 23 24 26 28 30 31 32 35 37 47 51
52 53 54 61 62 63 64 65 66 67 68 69 73 75 79 83 84 85
87 93 96 97 98 100 102 103 105 108 109 114 115 118 119
120 121 122 123 124 126 133 134 135 138 139 141 142 143
144 147 151 154 158 161 163 166 167 171 174 176 178 180
181 186 187 188 189 194 196 198 200 209 210 211 213 214
216 217 219 221 222 223 225 226 227 228 229 230 231 232
233 234 235 236 243 245 249 250 256 266 274 275 287 301
327 333 346 354 358 360 361 362 363 366 378 379 382 384
385 396 397 398 400 402 408 413 417 429 436 437 438 443
465 467 474 477 478 481 483 485 490 491 492 493 499 501
509 512 522 524 537 538 553 563 571 578 580 589 591 595
602 610 612 622 623 629 631 651 652 653 654 669 670 674
675 676 677 688 692 699 705 723 730 736 739 744 755 757
760 774 775 776 778 779 783 792 853 858 864 869 871 881
883 909 910 911 914 916 921 922 923 928 929 937 939 941
949 952 954 963 965 967 970 973 976 979 985 1013 1015
1016 1018 1023 1028 1030 1057 1061 1062 1078 1080 1081
1082 1083 1085 1086 1087 1088 1096 1104 1107 1108 1109
1111 1113 1121 1123 1131 1133 1135 1143 1146 1147 1219
1252 1257 1259 1260 1262 1266 1267 1271 1274 1275 1278
1285 1287 1292 1293 1295 1298 1307 1329 1342 1351 1356
1373 1380 1385 1389 1391 1392 1394 1399 1449 1457 1458

ACTIVATION ANALYSIS-TECHNIQUE USED

NON-DISCRIMINATORY COUNTING (A, B, Y) BUT INCLUDES HALF LIFE AND ABSORBER MEASUREMENTS, AUTORADIOGRAPHY, EMULSIONS (CONTINUED)

1462 1471 1473 1474 1477 1478 1479 1483 1494 1495 1506
1513 1520 1540 1546 1547 1563 1569 1577 1581 1601 1604
1621 1628 1636 1655 1560 1664 1671 1675 1677 1683 1685
1686 1693 1694 1700 1711 1713 1720 1726 1730 1743 1747
1751 1752 1754 1758 1762 1763 1764 1770 1772 1773 1774
1778 1780 1786 1787 1788 1798 1800 1812 1818 1822 1824
1830 1834 1839 1841 1844 1848 1858 1861 1862 1865 1870
1871 1872 1873 1874 1879 1888 1911 1924 1937 1945 1948
1952 1955 1959 1974 1976 1977 1979 1980 2323 2340 2384
2386 2409 2444 2455 2501 2523 2534 2554 2597 2633 2636
2640 2643 2654 2657 2658 2661 2680 2687 2712 2714 2717
2718 2721 2731 2735 2748 2759 2794 2797 2839 2845 2849
2853 2865 2873 2878 2920 2921 2927 2932 2940 2942 2943
2949 2964 2969 2976 2982 3064 3105 3361 3376 3391 3394
3397 3414 3469 3481 3482 3491 3669 3709 3714 3716 3726
3727 3729 3730 3732 3736 3746 3755 3767 3783 3962 3965
3976 3977 3981 3987 3995 4207 4267 4278 4296 4315 4319
4388 5295 5320 5350 5353 5356 5357 5359 5370 5381 5395
5397 5398 5403 5405 5406 5408 5422 5429 5439 5472 5501
5515 5517 5547 5581 5719 5731 5752 5769 5848 5851 5923
5927 5932 5933 5938 5965 5984 6004 6017 6031 6044 6063
6073 6086

NEUTRON COUNTING

82 88 169 170 206 207 321 380 479 514 554 770 782 808
819 839 841 843 866 904 905 908 978 983 1025 1070 1136
1270 1280 1302 1377 1393 1435 1637 1642 1782 1811 1822
1857 1906 2303 2318 2634 2751 2777 2963 2987 3491 3711
4277 5238 5262 5319 5323 5551 5735 5765 5953

PROMPT GAMMA COUNTING

184 185 312 383 665 713 1026 1049 1061 1178 1336 1337
1553 1576 1611 1651 1685 1772 1783 1785 1843 1898 1935
1951 1984 1985 2146 2254 2364 2429 2504 2530 2652 2684
2933 3033 3078 3089 3126 3362 3399 3466 3717 3741 3753
3811 3976 3979 4000 5177 5261 5372 5384 5566 5577 5733
5756 5773 5779 5919

ACTIVATION ANALYSIS-TECHNIQUE USED

NEUTRON FLUX DETERMINATION, INCLUDES SAMPLE SELF-SHIELDING AND FLUX PERTURBATIONS

125 161 179 186 205 209 212 221 304 305 306 316 347 377
391 396 399 403 467 510 552 581 609 662 701 735 743 794
828 832 840 843 845 853 854 868 903 1037 1044 1054 1064
1070 1085 1116 1156 1158 1161 1169 1261 1303 1331 1335
1347 1349 1418 1419 1420 1437 1452 1467 1477 1487 1511
1570 1593 1598 1624 1627 1641 1642 1647 1648 1659 1676
1696 1716 1729 1827 1877 1912 1936 1946 1950 1958 1981
1982 2280 2480 2537 2625 2754 2802 2957 3414 3479 3485
3719 3797 4224 5339 5447 5602 5860 5868 5962

CHARGE PARTICLE FLUX DETERMINATION, INCLUDES SAMPLE SELF SHIELDING

314 381 1312 3403 3719 4215

PHOTONUCLEAR FLUX DETERMINATION, INCLUDES SAMPLE SELF SHIELDING

1014 1176 3719 3791 5379

INTERFERING NUCLEAR REACTIONS

108 114 131 157 196 201 314 332 346 347 352 361 386 399
432 461 493 516 518 544 552 555 567 578 580 583 588 595
601 614 622 662 676 687 701 703 705 711 727 819 822 828
831 835 842 844 850 856 868 940 977 986 1010 1012 1104
1144 1145 1158 1160 1161 1180 1183 1184 1190 1192 1194
1198 1199 1341 1347 1375 1386 1398 1400 1408 1413 1420
1424 1425 1432 1433 1436 1455 1456 1477 1499 1507 1520
1525 1528 1598 1599 1601 1628 1647 1678 1731 1816 1899
1907 1911 1914 1920 1937 1938 1950 1968 2259 2283 2369
2495 2499 2515 2643 2562 2681 2723 2754 2767 2839 3384
3403 3414 3461 3470 3479 3485 3993 3994 4201 5341 5381
5382 5757 5978

OTHER ERRORS ASSOCIATED WITH IRRADIATION

131 205 212 291 295 297 300 306 322 328 344 346 388 399
476 505 533 614 620 621 622 828 835 836 842 845 850
1087 1261 1442 1528 1598 1647 1675 1676 1729 1731 1889
1910 1956 1972 1981 2681 2849 2948 2990 3101 3403 3479
3488 3781 3791 4206 4213 4224 4325 5339 5602 6066

ACTIVATION ANALYSIS-TECHNIQUE USED

COUNTING ERRORS AND CORRECTIONS

173 184 185 242 312 322 344 391 399 455 468 585 592 610
614 619 620 621 676 711 739 843 854 1090 1136 1161 1177
1178 1182 1187 1191 1195 1196 1199 1309 1347 1434 1601
1643 1662 1676 1684 1729 1873 1936 1937 1939 2280 2480
2497 2503 2580 2587 2643 2660 2692 3374 3466 3468 3479
3499 3791 4206 4213 4224 5385

PRECISION-ACCURACY DISCUSSED

57 105 108 110 113 114 130 201 205 212 255 263 267 284
285 286 287 288 289 290 305 312 322 329 337 342 344 399
400 519 549 553 583 609 614 621 622 656 691 739 808 840
841 842 843 853 854 863 866 868 952 1017 1027 1040 1064
1076 1080 1082 1084 1085 1090 1094 1160 1162 1167 1169
1171 1172 1175 1178 1180 1181 1182 1183 1184 1187 1191
1193 1196 1199 1255 1328 1347 1362 1414 1415 1439 1442
1453 1462 1466 1484 1505 1518 1528 1537 1541 1598 1599
1627 1628 1641 1643 1647 1729 1731 1782 1815 1865 1872
1873 1885 1889 1912 1913 1950 1967 1969 1979 1981 1983
2157 2455 2499 2503 2525 2534 2537 2539 2541 2542 2549
2652 2686 2754 2755 2777 2836 2849 2873 3079 3091 3099
3368 3381 3382 3418 3482 3488 3514 4196 4203 4276 4278
5341 5353 5366 5368 5372 5381 5385 5390 5713

SENSITIVITY TABLES

16 111 130 132 141 162 164 201 203 205 218 281 293 294
295 296 297 298 312 337 340 342 343 344 345 347 409 435
446 447 449 566 580 584 603 618 641 643 644 646 659 663
668 671 678 679 685 702 703 708 722 736 748 751 808 810
835 836 837 841 843 846 850 852 859 873 877 890 894 901
918 942 951 972 1039 1040 1049 1051 1065 1088 1097 1144
1148 1152 1154 1162 1166 1172 1190 1193 1196 1304 1312
1315 1327 1347 1352 1353 1355 1361 1375 1404 1407 1416
1417 1421 1425 1439 1464 1465 1503 1522 1524 1536 1540
1620 1642 1656 1666 1669 1673 1676 1691 1731 1755 1808
1838 1854 1873 1874 1875 1881 1885 1889 1903 1911 1935
1940 1941 2452 2516 2567 2568 2663 2690 2697 2799 2924
2937 2939 3059 3071 3082 3091 3366 3395 3483 3487 3508
3756 3772 3793 3803 3978 3980 4294 5347 5372 5379 5384
5389 5993

ACTIVATION ANALYSIS-TECHNIQUE USED

PRECONCENTRATION, CONTAMINATION, COLLECTION AND HANDLING TECHNIQUES

47 61 160 179 183 192 263 322 331 354 377 385 422 437
438 477 493 511 542 543 586 614 708 721 813 829 850 851
932 933 1107 1129 1141 1143 1181 1242 1281 1342 1404
1409 1412 1416 1427 1428 1432 1436 1455 1462 1463 1478
1479 1497 1518 1526 1529 1609 1628 1636 1653 1655 1708
1722 1747 1750 1770 1774 1811 1832 1835 1874 1914 2440
2511 2540 2598 2621 2635 2637 2665 2672 2685 2687 2695
2696 2734 2746 2752 2800 2904 2936 2981 2984 2989 3100
3358 3507 3508 3509 3724 3959 3960 3964 4201 4217 4219
4273 4296 4302 4314 5341 5357 5358 5359 5368 5451 5869
5873 5929 5959 5962 5963 6002 6052 6068 6076 6081

IRRADIATION TECHNIQUES, SAMPLE HANDLING AND FACILITIES, FLUX MONITORS

125 131 146 181 192 199 205 280 281 285 316 324 341 348
455 500 614 625 631 635 658 670 702 714 719 737 765 819
824 843 846 848 852 898 950 961 979 1029 1048 1054 1055
1083 1097 1116 1136 1145 1148 1248 1256 1258 1269 1277
1407 1418 1437 1439 1440 1517 1523 1528 1539 1545 1627
1642 1658 1659 1661 1663 1676 1695 1696 1698 1701 1702
1706 1712 1717 1722 1729 1845 1853 1861 1864 1868 1875
1883 1889 1912 1916 1920 1922 1923 1940 1945 1956 1957
1965 2104 2147 2335 2410 2501 2524 2527 2536 2542 2548
2549 2564 2576 2598 2659 2672 2787 2849 2924 2936 2937
2939 2948 3333 3376 3403 3461 3507 3509 3745 3751 3790
3791 3796 3797 3808 3956 3981 4251 4260 5318 5425 5443
5451 5594 5610 5694 5711 5733 5748 5868 5873 5943 5952
5963 5983 6059

ACTIVATION ANALYSIS STANDARDS AND STANDARD REFERENCE MATERIALS

205 306 314 361 362 363 365 367 371 572 581 587 600 676
687 808 820 841 953 1076 1126 1187 1255 1282 1293 1431
1433 1596 2501 2537 3413 3472 3481 3560 4320 5985

ACTIVATION ANALYSIS-TECHNIQUE USED

COMPUTER APPLICATIONS AND NUMERICAL METHODS

18 36 58 156 199 201 273 520 527 534 574 590 642 693
707 759 826 845 977 1033 1041 1058 1073 1251 1328 1359
1419 1457 1508 1556 1557 1567 1580 1617 1620 1622 1691
1702 1735 1737 1790 1809 1819 1826 1851 1866 1868 1919
1947 2107 2116 2387 2450 2494 2506 2508 2514 2515 2521
2533 2538 2545 2547 2548 2574 2602 2673 2689 2691 2702
2706 2715 2740 2760 2767 2801 3082 3263 3353 3356 3380
3381 3391 3500 3514 3550 3552 3662 3741 3776 3791 3798
3809 4200 4210 4243 4275 4287 4326 4377 4393 4397 5348
5361 5376 5498 5513 5546 5583 5587 5618 5620 5740 5744
5745 5778 5937 5971 6046 6082 6087

DATA HANDLING SYSTEMS

590 931 961 1116 1279 1567 1620 1670 1702 1712 1954
2547 2702 2703 2707 2740 2951 2968 3356 3662 3791 4199
4200 5434

ELECTRONICS IN ACTIVATION ANALYSIS

318 352 389 393 653 682 837 1058 1079 1116 1350 1358
1602 1612 1944 1984 2252 2500 2529 2538 2561 2650 2702
2703 2704 2710 2738 2740 2779 2801 3117 3424 3426 3438
3443 3521 3548 3662 3741 3790 3791 4280 4289 5380 5414
5434 5943

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